

Junction to Sungai Kasahai - 1st turn left by Ranjeng  
1km from Ranjeng 205m  
0 49 58.8" ~~turn left~~  
112 52 22.6"

Riang  
Junction to Sungai ~~Sekatin~~ turns to left,

0 49 09.4

112 51 45.8 We are heading West,  
river to SSW. Red posts

junction, probably from logging company

LADANG ALL WAY

Riam Penabam - double rapids

0 48 27.9  
112 51 32.9 220m

Just up from Kiam Kelchan, turning from E-W to  
S, North away bridge Sungai Masai/Samba. This  
goes past camp Block - heavily silted (MASAWEL)

0 48 23.1

112 51 33.8 (300m from junction)

STILL LADANG

~~Kiam Bajasepapak~~ Baja Basapak

0 47 39.3 250m

112 50 49.9

NOMORE LADANG - River difficult to pass.  
Last station shortly downstream, belongs to  
a local woman

T. Rajang 14.1 km / 138° to Rajang

14.1 km, 138° to

[SAME] - WP-28

Camp 1 -

0 46

26.9

} 275m

112 49

04.6

SPS finches. BCP or lightning. By river by  
a couple of small islands. Very thick, as  
on on. Already found Puffin. spp. was  
as a Cat Caracum at white fruit,  
not Intercala, and a Shorea

At this point logs are still taken, barked,  
and left in the river until carried down by  
flow. Most are ~~unmarked~~ unmarked, 25' long.  
A few are marked by cut in the bark saying

downstream and availability of wood in the  
river or stream.

Friday Feb 10, 1995

~~Up~~ From "a bit below" Camp 1 logs are no longer  
taken. Rapids are met every 200-300m, slowing progress  
considerably. The fix below is another River - have  
to unload all boats to negotiate it

$0^{\circ} 45' 18.6''$  } Good fix

$112^{\circ} 47' 31.3''$  } (15m?)

Banks on the right side of the river going up, green  
east, are steep. The western bank is sometimes steep,  
sometimes flatter and a bit. All along way we  
see Dipt. drong. ; The Blue canyon, the eastern.

TAMAN NASIONAL  
Riam TARUNG 401

[BBRB63]

B  
TN  
63

255m NATIONAL PARK  
Still on SUNLAI, SABRA

0° 45' 03.4" } 100m  
112° 46' 46.5" } 566  
TO BATES

Lots of rapids up to this point. Difficult  
to navigate. One blotch already  
punctured and covered - lost on bar

Camp 2 [BRC-2] 295m

17K  
1350

~~0° 44' 15.4" 112° 46' 22.4"~~  
This camp was first made by Noddeboom, ~~lost~~ and  
since then has been regularly used by fishermen,  
gahong hunters, people just out and about.  
The fishing is incredible. We got out the  
boat and the guys caught a 50cm gahong  
with their hands. Within minutes of that another  
2 were found. ~~the~~ 3 we have seen

0° 44' 15.4" } 295m  
112° 46' 22.4"

Program has been v. slow. We all get  
tired pushing the boat up the rapids  
and hardly help at all. We should be  
as far as we can get 2 a blotch tomorrow  
afternoon



Two more are further up the mountain. The plan is to collect tomorrow and let some of the guys rest. The day after we will go to the summit. There seems to be a collective opinion as regards to this. We have a lot of the way up. I'm proceeding, if possible. Apparently the spots are being put for some time in 1970, I think.

The river bank vegetation has changed. The Santiria (?) ~~flavens~~ fruiting stems are not here. There is a lot of less vegetation. The river has been very difficult to negotiate so far. We are going and use the Metch as an unyielding shield-barrier. But it is not. The trip to BR should take 2-3 months to get to. I am going to get down. 4-5 days should do it. We have to do it. I want to do it.

2 1 55

117

46

~~NNW N NNE 180~~  
~~NN NE 142~~  
~~NNW S 222~~  
~~-W SEE~~  
~~SWW SE~~  
~~SWW S 66~~

Sun. Feb 12

Loads of fish have been smoked, ready for tomorrow  
 One day's collecting, then tomorrow to the top.  
 Pak Mui says by the camp we are at, an old  
 lady is about "100 yrs" old Has planted durian,

TUMBANU TO SA is camp 3 hrs walk from  
 here where N warbon stayed - To right before is S, Harom

ENG Peters - the wild durian test J.

~~Harom~~ Camp 2 is 36 km from Jelutong,  
 3.20. Not far.

Chicken sacrifice this morning - picture taken

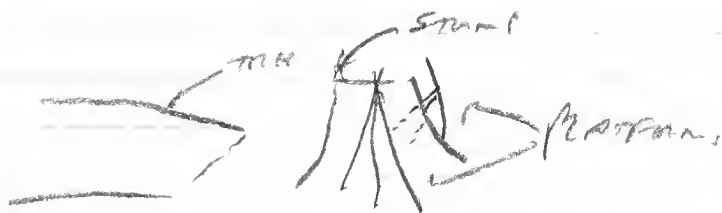
river and heads straight up the hill. The  
guide lost the way so we camped at our  
current location by the river. Mules and mules  
found Thursday Dene while searching for it  
yesterday afternoon. It is the best place for  
live

The port on the river would be a good place to  
camp at the rate of one party every 2 or 3 days  
for a "journey". Its almost of religious  
significance especially of the Christian  
people. At the top they take some wood  
they like and make a small party  
back at the village.

Some people were seen on the way.  
Locals will not permit travel  
if they do not have permission in the  
village.

Examples were the testy Beccaries and  
Rambutan. They were very excited to  
see a rambutan tree, but did not  
seem inclined to take any seeds back.

We ~~also~~ also found a large Diploca  
by the river, abt 70 cm, cut by hand axes  
on a tapered platform.



According to our guide, this would have  
been the last of the honey.

[But Advantages over From the  
in villages] The effort involved  
must have been enormous.

The river flows quickly, very fast,  
past of falls and large rapids.

Diversity here does not appear too high. We have few flies and frogs, the guys reacher September is the time to be here. .... Alison! Bees are few, only one butterfly seen, quite a few flies. None of the insects are insane - NO LEECHES!!!

Temp dropped to  $13^{\circ}\text{C}$  last night. With the sun it seems to get to  $27^{\circ}\text{C}$ .

This ridge runs East-West. To S-SW in Kalbar, N-NE Kallery. Winds are carrying the clouds from Kallery to Kallery. SW of this point, two scars are seen. One to SSW would appear to be a landslide one more to SW in a flat area. No fire, logging, badging is evident checked from satellite map.

We are 29.6 km from RJONG  $134^{\circ}$

926  $225^{\circ}$  Boyer

\* Guides say there are 2 types of Dactylopsium here, the small one at the summit, the larger one here at 2000m

1870-1871

1872-1873

1874-1875

1876-1877

1878-1879

1880

Tumbang ~~Dosa~~ TOSAH [TUMTOS]

460m.  $0^{\circ} 41' 40.0''$  /  $112^{\circ} 44' 25.8''$

River is about 12m wide, rushing over granite boulders.  
 River runs NW-SE at this point. Banks are  
 not particularly steep, lots of Shorea. No Dipt. Ab.,  
 prefer slow river!

Left river at 10.00

- 750m - guys leave their Vellies behind - too slippery!
- 870 come across Agathis

2.00pm. Stop to make camp. This is the last place where water is accessible until the top.

Dipt. are getting fewer, Fagaceae more so (infl. on ground).  
Agathis v. infrequent. Throat trees we get good views  
 of mountains below. Lichens are starting to get forest-like,  
 mosses common - start of cloud forest.

We have been climbing every steep ridge (even  
 knackered on many occasions - but worth it).

Camp at 1200m

- Campy max 15m tall.
- Water is a long drop from camp.

Feb 15 '95 - Wednesday

[BRANAD]

0' 39' 35.0" ) 2310m  
112° 41' 20.7" ) 7580'

I thought I was going to die.....

[1430m - Balanayham]

We left the last camp at 7:55 am, w/ 1100m to go. At 1400 we were clearly in the last of the bagasse, bagasse forest going into moss forest. At 1800-1900m the walk becomes rougher, back in large drops on both sides, at one point 7200m. Sometimes we got views of the top of Br Naga. The walk goes a long way through moss forest, very crude - Stelima noted at 1800m. At this alt. I have loads of Ericaceae, Myrica, Myrica mosses and ferns. The bracket (Ep/S) is a bit better from years of occupation here. Despite this, the area is primitive.

Top of Summit is like a very maze through moss forest



minutely ~~flaking~~, inner bark orange yellow  
Lvs light green above, v. light ~~blue~~ green  
below. Venation not prominent but distinct.  
Fruit with persistent reflexed red calyx  
Carpels opening purple. As torus (?) enlarges,  
seems that ~~new~~ carpels start to abort until only  
1 or 2 are left. Fruit about 1.5 cm across  
Rare

5002 x10

*Passiflora* *Passifloraceae* ✓  
Liana - common by roadside. Fls 3 cm across  
Petals white, appendages purple below, white  
above. Fts start green, ripen orange. When  
ripe, bract fall away exposing entire fruit.  
About 16 seeds per fruit, sweet. Lvs light  
green.

5003 x10 *Rubus mollis* Rosaceae ✓

★  
Linn; common by roadside Lvs dark green  
above, ~~light green~~ below covered in wax-brown  
tomentum. Fruits w/ persistent reflexed calyx,  
capsules red. Flavors sweet.

5004 x10 ★ *Sesuvium* Asteraceae ✓  
A-5

Herb. Locally abundant in thin cleared area.  
To 1 m tall. Florets yellow.

5005 x10 *Cosmos* Asteraceae ✓  
★ A-5

Locally abundant. Herb, to 1 m tall. Lamina green,  
reddish-purple. Ray florets rich purple,  
disk florets golden yellow. Yg. flos light  
green, lower part of follicle black purple.

★  
5006 x10 *Brucea* Simarubaceae ✓

Locally abundant. Shrub, to 2 m. Lvs

light green w/ light indumentum  $C_4 K_4 A_4 G_4$   
style 4, stamens app 6.  $\frac{5 \text{ sep}}{6 \text{ cov}}$  apoc

Fls minute



Locally abundant. 0.75 m tall. Ligules (?)  
black, bracts purple-black, seath becoming white.

5009 Ficus Morue ✓  
X10

Tree, 10 m branching near base. Bark grey-white,  
littered patches. Synconia green, orange rust  
at apex. Lvs <sup>light</sup> green above, light green  
below. Capitula sticky white latex.

5010 Linaceae / Indoranchera (?) ✓  
X2

Liana. Leaves light green above and  
below. Fruits orange, single seeded. Calyx and  
styles persistent. Calyx green, style dried and  
black.

5012 Fabaceae - Phanera(?) ✓

x9

Climber. Bark brown, densely covered in red  
lenticels. Stipules green below, red above, soon  
caducous. Young petals yellow, becoming  
orange then green. Lvs dark green above, light  
green below in misty-red indumentum in vms.

5013 Artabotrys Annonaceae ✓

x8 Climber. Bark smooth, brown. Young twigs  
green. Sepals green

5014 Melastomataceae x5 ✓

Climber. Calyx and bracts of 0.4 cm thick black red  
indumentum. ~~Peta~~ C<sub>4</sub> K<sub>4</sub> A<sub>8</sub>, petals white  
Leaves glaucous below in red indumentum

5015

Fabaceae x10 ✓

Climber. Lvs trifoliate, stipules persistent.  
2 fls leathery, dark above, lighter below  
w/ rust-red indumentum. Yg pods with a  
silky indumentum. Bark red-brown. Fls pale  
yellow - some already recter reddish. Older  
pods membranous.

5016 x10 ✓

Celastraceae

Scrambler. Lvs light gr. Inflo. in heads. Acorne  
hairsnake-sweat. ~~petals~~ Ca 4, K 4, A 8. Petals  
white, anthers yellow. Fruit a 4-winged capsule,  
single seeded.

5017 x1 ✓

Fabaceae cf. Peris

Wing fls 3 cm long Petals white Wing white  
outside yellow centre. Laterals white. Keel  
yellow. Pod 1-20 cm x 4.



Small tree, 6 m tall. Bark smooth, light  
fawn brown w/ whitish lichen patches. Fls  
small, regularly sweet smelling, C<sub>4</sub>K<sub>4</sub>A<sub>4</sub>G<sub>4</sub>St<sub>4</sub>  
one. Each carpel green (not quite ripe) w/ one  
white seed. Smell of fruit slightly citric.

5020x3 Fapaceae - Bauhinia ✓

Growing under grass. Lvs holed at both ends.  
Dark glossy above, glaucous below. Sepals  
green. Petals white, turning orange.

5021 Medinilla - Melastomataceae ✓  
L10

Shrub, 4m. Leaves leathery, waxy green. Inflo  
racemiflorous, <sup>and cauliflorous</sup> calyx tube red varieg. Petals  
rojo-purple, anthers yellow. Bracts light-green,  
smooth, thin. Wood white.

Clumping climber. Parts glaucous and covered in  
a thin red meshy indumentum. Fl buds dark  
gray. Perianth light purple above, white  
below.

5024 x6

Vitex cf. pinnata Verbenaceae ✓

Common shrub, 4 m tall, fls white) <sup>purple</sup> ~~gray~~. Bark  
dusky grey, smooth.

5025 x6

✓

Convolvulaceae

Ipomoea

Common roadside <sup>creeper</sup> ~~vine~~ ~~vine~~. Lvs light green.  
Ca grey yellow / K bright yellow. Filaments  
white, anthers yellow.

5026 Mallotus - Euphorbiaceae x6 ✓

Common shrub, 4m tall. Bark brown gray - white patched. Lvs and twigs covered in a sticky indumentum. Lvs glaucous above, white glaucous below. Fruits glaucous covered in a thick indumentum. 5 chambered, one seed per chamber. In the 4 fruits opened only one seemed fertile, w/ purple testa.

5027<sup>3</sup> Rubiaceae - Anthecephalus chinensis

Tree, 15m. Bark white gray. Nodulose and vertically fissured. Branches reach out vertically. Infl. terminal heads ✓

5039<sup>x1</sup> Zingiberaceae x1 - Alpinia

Grows in the ground. Fls. red margined w/ tipped, yellow within. Bracts pink

0	0
4	2
7	2
8	6
9	2

5028 Fabaceae - Archidendron x4 ✓

Small tree, 5m. Frts already old. Seeds purple-black. Bark light gray, smooth



Smooth, light gray. Lvs dark green above,  
white-red glaucous below with red indumentum  
on veins. Fts hardening, becoming spiny.

5031 <sup>x6</sup> - *Grewia hexandra*? Verbenaceae ✓

Common shrub, 4m tall. Bark red-brown, smooth.  
Lvs glaucous below, fts fragrant, small like  
~~flower~~ Fts small w/ persistent calyx.

5032 x4 Melastoma - Melastomaceae ✓

Small shrub, <sup>to 5m</sup> common. Bark i. b's. Petal purplish  
<sup>large</sup> stamens purple, small stamens yellow. Bark fawn  
brown. Lvs glaucous below w/ red indumentum  
on vns.

5033<sup>x6</sup> Ficus - Deltoid lv. ✓

Spreading shrub, 2 m tall, 6 m diam. Lvs  
dark green above, lighter below w/ yellow var.  
Synicaria ripening orange, fruits w/ red.  
Not common.

✓ 5034<sup>x6</sup> Hamdanthus Euphorbiaceae  
Shrubs or small trees to 4 m. Bark light  
grey w/ lichen patches. Lvs glaucous,  
dark green above, light below. Fls yellow, small  
Frts green, stigmas a crescent and green.

5035<sup>x6</sup> ~~Macaranga~~ Euphorbiaceae  
Common small tree. Bark scurfy dark grey/black  
Lvs light green below, w/ petioles and stipules  
red. Frts ripening purple.

5036<sup>x5</sup> - Croton Euphorbiaceae ✓  
Scrambler. 1.5 m tall and spreading. Lvs  
light green. Fruits hard with a scurfy outer covering.  
Styles persistent, black.

Cheer # on 2nd.

~~5044~~

20:95 Alongside river Sambas - awaiting  
our stuff...

5040 - Dipt. db1

5041 - Apomisa

By Sambas river, 175m : 10° 03' 18.1" / 113° 01' 11.4"

Main logging camp CAMP TURBACH TAP

5040 *Dipterocarpus oblongifolius* Dipt.

Tree, to 20m tall, 1m dbh. Bark light-dark  
gray. Arches over river, based on bark. Leaves  
light green. Fruits red. U. common along  
river sides.

5041 Apocynaceae

Euphorbiaceae

Small tree, 4m. Bark dark grey. Lvs dark green above, light green below w/ rusty-red indumentum on vms. Fruits, 1cm, drying yellow orange. Three seeds inside, each bright orange.

5042 Nauclea Rubiaceae

By riverside. 3m tall tree, <sup>20cm dbh</sup> bark lichen patched, fruiting heads light green.

5043 Antidesma

Euphorbiaceae

Tree to 10m tall, 30cm dbh. Bark light grey. Lvs distichous light green above and below. Frs 5 chambered <sup>2-3cm</sup> ripening from blood-red scarlet  $\rightarrow$  black. Grows away from side of river.

5044 - Ficus

Moraceae

Tree, 5m, 30cm dbh. Bark light grey. Inner bark pink w/ white exudate. Inff. caniflorum or cauliferous Syconia ripening red, fruit brown, pear shaped. About 5x4 cm.

Tree, 4 m. Bark white-brown. ~~Fr.~~ <sup>Inflorescence</sup> can. forming  
radial green fruits 3 cm diam, bright red, fleshy, 3  
lobed. One seed per lobe, each with an inviscerent  
purple test. Lvs cluster at ends of branches.

5047 Orchid x1

On Baccaea (sorb) leaves yellow and pink-spotted above, purple and <sup>dark</sup> purple spotted below. Flower white, anthers purple.

5048 Mass

Off Because - 52+6.

5049 Moss

off Receivable 5046

5046

5050 Licula

ACECEAE

Palm, stem 1.5 m. tall, fruiting at apex. Fruit green, ~~ends~~ 1.5 cm diam. Endosperm white, embryo rust brown. Leaf stalks 2-3 m long, armed on the sides below.

5051 - Bracket fungus on fallen tree

5052 - Fern - climbing Shorea sp.

5053 - Vrophyllum

Rubiaceae

Shrub - 1.5 m tall. Lvs glaucous light green below, lime green above. Calyx tube orange, petals white. Bark grey-black.

5054

Canarium - Burseraceae

Tree, 15 m tall, 35 cm dbh. Lvs light green below w/ red indumentum, darker above. Fruits light brown, 7x4 cm, calyx 1.5 cm across. Pericarp  $\frac{1}{2}$  cm thick, one locule aborting in the fruit not open. Foliar latex clear exudate.

Slender, bark light gray. Foliage shoots  
green. These shoots and leaves turn light  
green. Articulating pedicels dull red. Flower  
parts yellow-orange. Frs red 1 x 0.5 cm,  
pericarp 3m, seeds in fleshy aril (?), - colorless

5057

Lichen on bark of Canarium (5054).  
Light gray, occurring in patches.

5058 x 8

Shorea (Sterhms?) Dipterocarpaceae

Tree, 6m tall, 15cm dbh ALREADY FRUITING!

Bark light brown, very lichen patched.

Lvs. distinctive on branches. Frs green, red on  
wings

5061

Moss growing up creeper

5062 x 1

Hydrocarpus

Flacourtiaceae

Tree, 6m x 30cm dbh. Bark light-dark  
gray, smooth. Inner bark light brown, wood  
yellow. Lvs light gm  $\rightarrow$  yellow green. Fruits  
3-10 cm, russet-brown. Inside of fruit white,  
or older

~~5062~~

5063 x 6

Apocynaceae

Euphorbiaceae

Tree, 7m, 20cm dbh. Bark, long. fissured,  
brown, flaking. Inner bark thin, brown, wood  
yellow. Fruit matt, light scarlet, 1 x 0.75 cm.  
Petiole persistent. Seed 1, testa yellow. Embryo



flattened across the largest dimension of the seed.

5064

Small Bram bracket fungi,  $\leq 1$  cm across,  
on branch of fallen Shorea

5065

Orchidaceae

Growing on fallen Muntingia. Flowers 0.7 mm,  
white w/ 4 vertical purple-bran stripes inside

5066

Shorea

Dipterocarpaceae

Tree, 25m, 50 cm dbh. Outer bark dark  
brown w/ longitudinal fissures, fleshy.  
Bulbiformes 1.5 m up, 1 m out. Pinnar  
yellow. Wings of seeds red.

5067

Moss from fallen Euphorbia tree.

5068

Cesoniaceae x1 Res

Epiphyte on fallen Euphorbiaceae. Lvs  
light green below, dark green above.

bark green. Wood distinctly angled.

5070

Moss on outer limb of a large Shorea

5071 Fungus

Fungus on climb of ~~Hydn~~ Hypocrea flaccidissima  
White, almost transparent, greenish glass like  
type fungus

5072 Pison deltoidea

Moraceae

"Tabat barito"

Climber. Leaves dark glossy green above  
light green below. White latex on cut parts.  
Syncladia green, 1 cm diam. Fruits red.  
Growing up a mesquite.

lt's petals purple. Anthers yellow.  
Fruits dark purple. Inside of being darker with  
numerous seeds. Inflorescences prominent because  
of cream white bracts.

### 5075 fungus

Growing as small cluster of 0.7 cm tall of  
mushrooms. Rusty orange red. Distributed at  
irregular intervals along about 3 m of a branch  
of a Shorea.

### 5076

Mallans - Euphorbiaceae

Small tree. Twigs, petioles, stipules and leaf  
undersurfaces w/ not red inflorescence. Ffrs  
2 cm across, breaking into three.

Small tree, 5m. Bark light gray, green  
below. Lvs dark green above, light below.  
Inflo. axillary, buds yellow green.

5079

Higher off trunk of large Shorea, 75 cm  
dbh.

5080 Humata of Fern

On trunk of large Shorea, 75 cm dbh

5081 *Pracaphyllanthus* Rubiaceae.

Tree, 15 cm dbh. Bark smooth, light  
grey. Lvs lightish green. Catyp. tube green.

5083 Orchidaceae Coelogyne(?)

Epiphyte on Annonaceae (5082). Lvs dull red-bron. fls translucent fawn brown, dark brown abv and blw entrance to flwr.

5084 Polyalthia Annonaceae

Small tree, 5 m. ~~Tree~~ Bark smooth and light gray. Lvs dark green above, light below. Fruit bright red, 2 x 1 cm. Seed white

5085 Euphorbiaceae

Tree, 8 m, 20 cm dbh. Bark gray, smooth. Lvs light green. Frt light green, fuzzy, warty. Seed enc. bright white. Inside skin of fruit is a brown layer, 3 mm thick.

5086

Lichens on lvs of 5085

5087

Lichens on lvs of 5082

5088 Ficus - Marauae

Climber on large shrubs. Bark brown grey. Lvs leathery, glab, smooth. Syncoenia glab, 1 cm diam, fruits brown.

5089 Moss on large Meranti

5090 Fungus breeding down meranti  
Orange and gelatinous.

5092 Lichen from branch of 5093 - Lithocarpus

5093 - Lithocarpus x6

Tree, 10m, 30 cm dbh. Bark smoothish, brown, heavily lichen patched, inner bark red, wood yellow. Petioles dark, lvs leathery.

5094 Lichen from branch of Shorea, 5091

5095 Fern. Lvs light green. (Pharosia  
(DNA) Polypod)

5096 Myrsine - Myrsineaceae x10 (DNA)

Tree, 15m, 35 cm dbh. Bark lightly fissured  
gray, and vertic (2x1 cm). First branch @ 10m.  
Lvs green above, brown glaucous below. Fruits  
brown, 8x5 cm, seed 4x1 cm, and white  
dissected to base.

5097. Mass from bark of Myrist. 5096

5098 Melastom - Euph. x1

Tree, 4 m, bark brown. Lvs light gm ~~below~~ above,  
v. light below. Fruits 2 cm across, spiny

5099

Blue thallus crusty lichen on limb  
of Macaranga. Tree sterile so ~~bag~~ put  
in bag for future identification

5100

Yellow white crusty lichen on Myristicaceae 5096

5101 Shorea Dipt - MK (DNA)

Tree 15 m, 20 cm dbh. Bark smooth, light  
brown, smooth lichen patches, lvs small,  
thin; ~~unc~~ barely visible. Fruits small, about  
5 cm long. Wood yellow



on the bark

Accrescent petals to about 4x1.5 cm, scarlet-pink  
fruit dark.

\* Inner bark red, wood yellow-pink

~~S103~~<sup>S103</sup> Lichen from bark of Swintonia S102

~~S104~~ S104 DNA Sonchastylis

~~Sapotaceae~~. Tree, 15 m, 30 cm dbh.

Bark dark brown, slightly rugose. Cut palm  
exuding sap. Lvs gracile, light green below,  
dark above. Young lvs brown below. Gland  
dots visible to eye - dark green, fls brown, 5x3 cm  
rugose, calyx lobes accrescent.

S105

White lichen on bark of Sapotaceae  
(S104)

5106 - *Araceae*

Herb, 0.75 m - Stems green, fruit orange, 1 x 0.5 cm

DNA  
5107 - *Eleocharis* *Eleocharis*  
1 fallen specimen, Bark dark brown, Petioles light  
green. Vase on lvs yellow. Frts 1.5 cm long

5108

Moss/lichen patch from branch of Shorea

5109

Orchid from branch of Shorea

5110

Leaf lichen on Shorea - 30 m tree

\* 5107 - found the tree. DNA

Tree, 25 m, 45 cm dbh, Bark almost grey, fissured  
lvs 1 x 1 cm blades, hard. Inner bark red, wood  
yellow. First branch 10 m.  
Bark light - dull grey.

5112

Shorea - Dipt x 8

Tree, 25m, 60cm dbh. Bark peeling fissured,  
chocolate brown, wood yellowish. Lvs  
waxy smooth. Fts immature

5113

Lichen from bark of Shorea (5112)

5114 Vatica - Dipt x 8 DNA

Tree 20m? Bark shallowly fissured, grey line in.  
Branches bark smooth after lichen peeled  
Young twigs and undersides of lvs w/ a brown tomentum  
Fts 1cm across, then cut along of oil glands  
around the seed exude resin. Outside of  
fruit fuzzy brown.

Testa purple.

5117 *Medinilla* - *Medastomataceae* X6  
Climber on Shorea. Bark light grey, knotted.  
Lvs glossy dark green above, glaucous light  
green below. Infls. rachis light orange. Petals  
orange, other parts orange yellow.

5118 *Orchidaceae* ~~*Pontopythium?*~~  
Epiphyte on *Shorea* @ about 50 m. Found  
on underside of canopy branch of crown.

5119 *Pinanga* - *Areceae* X1  
Herb, 1 m tall. Fruits cream white, seed cream and  
marbled orange in X-section.

undersurface venation of red-brown intermediate  
Calyx tube of adpressed silky intermediate.  
Lvs dark green above, glaucous (slightly) below?

5122 Rubiaceae Ixora x1

Shrub 1.5 m tall. Bark smooth, light gray.  
Young shoot green, inflo. rachis purple, peduncle  
dark purple, fruit light green

5123 Celastraceae x2

Pohon, 1 m, 15 cm. Bark light gray, rugose.  
Lvs light green below. Fruit 6 x 2 cm, 3-angled

5124 Euphorbiaceae x4

Shrub, 3 m. Bark chocolate brown. Lvs leathery.  
Fruit green, 3-lobed, one seed per locule.

Tree 15m, 20 cm dbh. Bark black, tightly vertically fissured. Lvs dark abv, light below. Fls gm black, pericarp 1 cm yellow, 13 seeds embedded in pulp. Wood yellow.

5128 Dendrobium - Orchidaceae  
20 m up a fallen bamboo. Growing on main trunk. Petals cream-green inside, purple and yellow patched above. Plenish to about 15 cm long.

5129 Aceae x1  
Herb, 20 cm tall. Inflo 10 cm. Fruit orange 1.5 x 0.75 cm, seed white.

5132 - *Baccaurea* Euphorbiaceae X10 (DNA)

Small tree, 6m. Bark grey, smooth to slightly striate. Leaves clustered at ends of twigs. Lvs light green below w/ yellow midrib and secondaries, but dark ins. Fats red, 2 cm diam. Seeds 3, testis dark iridescent purple. \*10 cm dbh

5133 Euphorbiaceae *Cleistanthus?* (DNA)

Tree, 3m. Bark light grey. Lvs light green. Fruit dull green with dark brown line down into suture of each caplet.

5134 Rubiaceae

Tree, 6m, slender, 5 cm dbh. Lvs light green below. Frn about 1 x 0.5 cm, still immature and green. \*30 Vegetation almost impenetrable.

5135 Rubiaceae

(DNA)

Tree, 5m, slender. Bark red brown. Lvs light green below w/ prominent 3° venation. Calyx tube green, rest of flr white

5136 Rubiaceae - Ixora

Small tree, 5m, slender. Lvs waxy green below w/ yellow midrib, dark above.

Reich of inflorescence red, flower orange pink, corolla tube to 7 cm long

5137 Alpinia - Zingiberaceae

Herb, 1.5m tall. Inflr. terminal. Fls 5 cm long. Calyx white. Corolla dull orange outside, bright orange inside with red markings. Stamens tube white below, white-pink above, brown at apex.

5138 Moss growing on side of a tree of Sapotaceae

5139 yellow lichen growing on side of (DNA)  
tree of Sapotaceae



Fern. On forest floor. V. dark green

5143x1

5143X)  
Ferro. Graining on upper limbs of Shores

5144 Maracot - Araceae? ~~2-2~~ X)

Herb 25 cm dbh fls white, corolla tube  
10 cm long. fl. 3x2 cm white, spurred behind  
F 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Medicinal

Melastomataceae

Epiphyte on Shorea. Bark light grey.  
Inflo. rachis bright red. Frts light orange,  
numerous minute seeds inside

5147 Ochnaceae X1

Shrub, 0.5 m tall. Bark light grey. Yg  
sheath w/ dense bracts. Fls or 4 cm pedicels.  
Growing on a steep wet bank

5148 Ericaceae - Gaultheria X3

Epiphyte on large Shorea. Bark red-brown,  
heavily lenticelled. Bark brown, persistent  
on inflorescence. Frt still young, 0.75 cm diam.

(DNA)

Epiphyte on ~~leaf~~ Dipterocarpaceae. From  
upper canopy branch

5051 Orchidaceae

Epiphyte on Dipterocarpaceae from upper  
canopy branch

5052 Orchidaceae

Epiphyte on Dipterocarpaceae. From upper  
canopy branch. Cylindrical, petals green and  
red

5153 Fabaceae?

Climber. Bark dark grey, <sup>(DNA)</sup> lvs dark above,  
light below. Fruit bright red

5154 x 6

(DNA)

Syzygium Myrtaceae

Tree, 10m, 30 cm dbh. outer bark red  
brown. Inner bark fawn-brown. Lvs light  
green, leathery

5155 x 6

Orchidaceae

Epiphyte. Fls - calyx cream-green. Petals  
white, inner labellum yellow. Anthers  
yellow-cream. Fls 3 cm long

5156<sup>x1</sup>

Chunia

♀

Orchidaceae

Leaves green below, purple above. Fls  
purple, white and yellow inside, 1 cm long

5157<sup>x1</sup>

Orchidaceae

(Agrostophyllum?)

Pachin and some lvs orange, the rest  
orange-green. Fls clumped at apex of shoot,  
1 cm long, orange-yellow in color

Erythra. fls 1 cm long yellow-green  
outside, purple within.

~~5160~~

5160 Fern Diphatic? DNA

Erythrae on Shorea.

5161

Moss on Shorea

5162 x1

DNA

Microcos - Tiliaceae

~~Shorea~~ Tree, 7m. Bark light  
grey. Fruit drop shaped, bright orange. 17  
bright orange flesh. One seed, Reliance  
shesket taste.

5163

Moss-branch of Dipterocarp.

5164 Baccaurea Euphorbiaceae X3

DNA

Tree 5m. Bark light grey, thin. Wood light yellow. Leaves light green forming pseudosheaths at branch ends. Inflorescences cauliform. Berries bright scarlet red, to about 4 cm across, fleshy. Taste good but sharp. Seeds w/ fr. undercoat purple-violet testa.

5165 Ficus - Adrephium? X3

Epiphyte on tree (5m). Stay is that thin only grows on small trees. ~~Not a tree~~ ~~not~~

5167 MF X10

DNA

Shorea Dipt - Keratan - Shorea lamellata

Large tree to 30m? Bark smooth brown,

flaking in flakes of  $6 \times 8$  cm, Red

inner bark brown, wood cream white

Butresses large and spreading, Lvs dark

above, waxy white below. Fls 1.5 cm long,

petals yellow above, pink below, 3 calyx lobes  
broadly reflexed. Anthers 12, white.

5168

Lichen from Shorea (5167)

5169

Lichen from Shorea ~~5168~~ - Meranti marsh  
upper branch

Epiphyte on Shorea. Bark fawn brown and  
heavily lenticelled, thin. Inner bark green,  
wood white. Lvs pale green w/ yellow  
vms. Fl buds and inflorescence fresh covered w/  
a red mummurken.

5172 Shorea Skills x 4 (DIA)

Tree, 1-30m, 70 cm dbh? Bark brown tall  
and spreading, 4 x 2. Bark stripping  
red-brown slightly vertically fissured. Heavily  
lichen patch. Twig bark darker red brown  
heavily lenticelled. Damar white. Style 1 x 0.75 cm,  
torangular, cartaceous.



Clicker on meranti. Bark brown gray, Young twigs  
green, immature ferts gm, white above, Lvs light  
green

5175 Microcos - Tillicia (DNA)

Tree, 6m, 12cm dbh. Bark grey, white. 1/9  
twigs w/ fuzzy indumentum. Lvs dark gm above,  
light below. Ferts deep shaped, 2x1cm,  
orange, flesh yellow orange, single seeded

5176 Moss community on bole of Shorea

5177 Fern on bole of Shorea x 1.

5178 Fern on bole of Shorea

5179 Fern on bole of Shore x 4

5182 Euphorbiaceae (DNA)

Tree 10m, 10cm dbh. Outer bark red-brown, inner  
bark red, wood white. Twig bark red brown,  
Lvs light green. Infls. terminal, buds green.

5183 Anacardium - Moraceae - "Hilang"

Tree 20m, 25cm dbh. Bark light gray,  
lichen patched. Twigs grey to red-gray.  
Lvs dark green above, orange yellow below.  
Fruits about 25 x 15cm, yellow orange outside,  
yellow spin. Eaten by gibbons

Cut part exuding sticky white sap

(FRUITS WRAPPED, SPIRITS IN DIFFERENT BARK)

5184 Xanthophyllum Polygalaceae ? x10

(DNA)

Tree, 10m. Bark light grey, thin, flaking. Inner  
bark yellow, wood yellow & twigs green.

5186 Myrsineaceae X8 DNA  
Clambering shrub of Shorea, Bark dark brown,  
thickly lenticelled. Lvs light gm, leathery,  
venation almost invisible. Yg-felt gm  
w/ brown-red spots.

5187 Theaceae DNA Adinandra X6  
Tree, 6 m tall. Bark red-brown, wood  
yellow. Lvs thick, leathery, venation  
slightly visible. Fruit green, style 4 or  
long

5188 Fern - Asplenium XI  
Epiphyte on bole of ~~Euphorbiaceae~~ (Fabaceae)  
(5191)

5189 - Fern - Delicately growing X5  
near the side of the bole of ~~Euphorbiaceae~~  
Fabaceae (5191)

5190 Fern on side of ~~Euphorbia~~ <sup>Fabaceae (S. 81)</sup> X1

5191 Sarathua? Fabaceae

Small tree 4m. Bk. dark red-brown, inner bark red brown, wood yellow brown. Lvs dark green above, lighter green below. Peduncle red, fl. 15 cm long, seeds white.

5192 - Eucalyptus X8 (DNA)

Epiphyte ~~in~~ on Shorea. Bark light grey, thin, inner bark red. Wood yellow. Fls. 1 cm long, calyx tube succulent, petals 5's light green color. Yg shoot green. Lvs light green, leathery, 20 cm vaguely visible above, all other vegetation invisible.

5193 Shorea - Terengganu X10 (DNA)  
Tree, 20m, 60 cm dbh. Buttress 1.5 m up, 1.5 m wide. Bark smooth, brown, hooped, heavily mossed and lichen patched. Inner bark dark grey, wood yellow. ~~Fls.~~ Yg twigs thick, scaly red tomentum dense. Spikes 5 x 2 cm, thick leathery. Lvs dark green above, lighter below, rough to touch. Fls. 20 cm

yellow brown. Yg. tinge and lvs with scurfy  
underneath, ~~indurata~~ Inflorescence light green,  
bracts light yellow. Lvs very light green below.

5196 Orchidaceae Appendicularia x1  
Lvs red green below, red above. Fls yellow  
and red Epiphytic on Baccaea

5197 Orchidaceae Appendicularia x1  
Lvs green, stem fleshy. Yg. flowers green.  
Epiphytic on Baccaea.

5198 Gesneriaceae x2  
Epiphytic on Shorea, Lvs light green  
calyx cream or scarlet. Corolla red-spotted  
w/ black stripes. Style green. Stamens few,  
yellow green, paired anthers prominent.

5199

X2

(DNA)

Fern. Growing on side of wetman tree.

5200

Terrestrial fern. Lvs to 2m long

5201

Lichens on lvs of Licuala palm

5202 Rubiaceae - Passiflora x4

Small tree, 4m. Bark dark brown with  
dark brown indumentum. Lower bark green, smooth  
cream colored. Calyx tube green, red indumentum.  
Corolla cream, anthers yellow (DNA)

5203 Shorea

Mm

(DNA)

Large tree, measure of bark. Bark red brown,  
smooth. Wood cream yellow. Lvs matte, dark  
above light bands. Buds green, sparse

5204

Leaf lichen from Shorea (5203)

Cordia alliodora

5207 Passiflora Rubiaceae x4 DNA

Tree, 7m, 40cm dbh. Bark light to dark grey. Yg twigs w/ not red underneath. Lvs glossy above, glaucous below w/ red silky underneath or midrib and veins. Fruit covered w/ same silky fawn-brown underneath. Fruit yellowish inside w/ numerous seeds.

5208 Rattan Arecaceae  
Climber. Fruit scales green w/ brown edges

5209 ~~Arecaceae~~ Orchidaceae ? x DNA  
Climber w/ one large and one small tree 1 1/2 m for each. Almost all leaves

Light below. Frithred green  
growing at bottom of steep slope

5211 Arecaceae x3

fleshy herb w/ green stem. Fls white w/ 5-6 cm  
corolla tube. Growing at bottom of steep  
slope

5212 Gesneriaceae - Rhympomus x1

Fleshy herb. Leg spines abundant on  
upper surface. Flt purple, 8 cm long

5213 Fern - Matrycinum?

(DNA)

Fallen from tall tree

x2

Spare body 10 x 6 cm,



5216 - Menispermaceae

Climber on Shorea, ~~for~~ Bark ribbed, brown.  
Fruits 3x1 cm.

5217 - Flacn

Growing on bole of small tree near  
a stream at the bottom of a slope.

5218 Rubiaceae - Razranthum X6

Tree 1.6 m. Bark red brown. Wood  
cream-yellow. Lvs light green above,  
woolly white green underneath, dense  
below. Corolla translucent white, hairy  
at apex. (DND)

5219 - Schefflera Araliaceae

Climber. Bark brown, fuzzy indumentum  
- Inflo. tinged purple

5220 Korthalsia. Arecaceae x1

Climber fits canals, 2 cm diam. Scales  
red-brown w/ black margin. Flesh dirty-brown  
color. Seed white with black stripes in X-section

5221

Lichen - On bark of Fagaceae Form  
large yellow-green patches

5222 x4

(DNA)

Euphorbiaceae Tree 5 m, 6 cm dbh  
Bark red brown. Fts green, drying [1 cm]  
Black-purple on tree before splitting. Lvs  
light green below.

5223

Bracket fungus on fallen branch

Faboceae

Tree, 15m, 35cm dbh. Bark light brown,  
smooth, heavily lichen pitted, thin. Tiny  
bark light grey. Fls white except for yellow  
stamens, fls 7mm long, stamens 1cm.

5226

Lichen from bark of legume - 5225  
Patches white, to 20x30cm

5227

Moss from rotting log.

5228

White mold like mushroom on underside  
of rotting log

\* Top of Hill - 3400 m \*

## RIDGE FLORA

5229 Anacardiaceae - Xylocarpus? x8  
Tree, 10, 25 cm dbh. Bark thin, light orange-gray, smooth, lichen patched. Young rings with thick brown tannin, older ones glaucous, red-gray, dark edged. Fruits 3x1 cm, green. Opening to reveal red "flesh" w/ 3 seeds w/ purple testas (DNA)

5230 Tetraena - Dilleniaceae x8 (DNA)  
Climber. Twig bark light brown, flaking. Fruits 2 cm long, styles so far persistent, exserted. Ovary 4, ascending? seed 2, cream white, surrounded by white hair

5231 x5  
Ayousa - Euphorbiaceae  
Small tree, bark gray. Young rings w/ brown tannin. Barks light scaled red, each w/ one white seed.

5232  
Lichen on leaves of a Sterculiaceae.

Lvs dark green, light below, margin serrate  
Fruit undercoat purple.

5235

DNA

1x002 - Rubiacene

Shrub, 1m tall. Bark red-brown. Lvs  
light green and shiny below. Fruit still  
immature, green.

5236

Bracket fungus on rotting tree, 25 cm  
d.b.h. Dark brown above, light grey below.

5237

Terrestrial fungus. Stalk and top  
black, under surface smooth grey.

5238 Swintonia. Aracardiaceae X6

(DNA)

Tree, 20m tall, 40cm dbh. Bark light grey, smooth. Trunk bark faint brown. Branch below flower 2, purple. Petals 5, white inside of flower (reflexed) yellow. Sepals 2, purple, fruit purple, but parts exuding sap turning black.

5239 Durio beccarii Bombacaceae  
X1

(DNA)

Tree, 4 cm tall, 20 cm dbh, buttresses 1.5 m up, 1 m apart. Fruits 5 cm diam, at base. Vascular centers near and at base for 1/2 cm!iferous inflo.

5240

Moss on rotting log.

5241

Moss on rotting log, silvery green.

5242 Syzygium Myrtaceae X1

Tree, 4m. Bark brown. Lvs light green, venation almost invisible. Buds clavate, 2 cm. Shoddy specimen, but moss as well here it.

[76 specs]

Wed 25/1/95 Cutting block

5243

DNA

Swintonia Anacard

x6

Tree, 15m, 50cm dbh. Bark light gray, smooth, lichen patchy. Lvs leathery, dark gm above, light below. Petals white, ~~bark~~ ~~red~~ purple. Accrescent petals to 5 cm long, red-purple. Wood cream yellow. Slesh exudate turning black.

\*5244

Lichen on bark of Swintonia (5237)  
Bran and crusty w/ 3mm black dots.

5245 Dendrobium Orchidaceae x6

Epiphyte on Artocarpus of nitidus.  
Leaves and fruits gm.

5246 Fern parasitic? x3  
Epiphyte on Artocarpus of nitidus.  
Leaves glaucous ~~petals~~.

5247 \*

Lichen on bark on Artocarpus cf. nissim. Lichen  
dusky dark gray color

\* 5248 x1

Fungus on upper canopy branch of  
Shorea. Gills facing upward, red-cream  
color. Below white

\* 5249

Blue thallus lichen on upper canopy  
branch of Shorea

5250 Dipterocarpus

x4 (DNA)

Steile Tree, 30m, 70 cm dbh. Bark brown and  
gray, irregularly fissured and rough. Flaking.  
Stipules light green and red. Inner bark red

5251 Orchidaceae x8

Epiphyte on Dipterocarpus (5250)

\* 5252 Lichens on upper branches of  
Dipterocarpus (5250). Blue crusty with  
white patches, 5-10 mm long, about



5253 ~~Beyerliaceae~~ (Hernand?)

Tree, 8m, 35 cm dbh. Outer bark grey-brown, sticky, inner bark bright red, bark white  
Sap colorless. Lvs stipulate, palmate  
Fruit 10 cm long, winged. "Nut" 3 cm long  
Open reveals one seed, testa reddish, v. sticky.  
Smell of beans (DNA)

\*5254

Lichens from bark of 5253

5255 Annonaceae X3 (DNA)

Tree, 6m tall, 10 cm dbh. Bark smooth, light grey  
Teng bark grey-black. Fruits to 5 x 3 cm, ripening  
yellow, seeds up to 10, each covered in sweet  
translucent white flesh. Lvs thin mid-green.

5256

\* Leaf lichens from Annonaceae - 5255

5257 Lycopodium

Epiphyte on Dryopteris (5250)

\*5258

Blue-green lichen from upper canopy branch, more of leaf. Lichen round, 8 cm blue-turquoise above, black below.

\*5259

Sticky black-grey lichen from upper canopy branch of Dipterocarpus. Patch about 20x20 cm, rectangular (5250)

x 5260

Moss on upper canopy branch of Dipterocarpus (5250)

5261 Dendrobium? x3

Orchid-epiphyte on Dipterocarpus (5250)  
Petals red and white striped, fls. yellow-spotted.

5262 Dendrobium? x1

Orchid-epiphyte on Dipterocarpus (5250)  
Lvs. dark green. Fls. orange pink. Stamens orange-green.

5263 Medinilla Melastomataceae x4  
Epiphyte on Dipterocarpus (5250). Stem  
red. Lvs fleshy, green. Fruit green red  
peduncles. (DNA)

5264 Fern x3  
Epiphyte on Dipterocarpus (5250)

5265 Fern x1  
Epiphyte on Dipterocarpus (5250)

5266 Fern x3  
Epiphyte on Dipterocarpus (5250)

5267 Baccaea Euphorbiaceae x6  
Tree, br, 10cm dbh. Bark gray, shiny.  
Fruit red, fleshy. Seed in indehiscent  
yellow husk. Info. coriaceous, to 25cm long,  
fruits to 2cm diam.

~~5268~~ 5268 Asclepiadaceae x1  
Epiphyte Lvs. fleshy light green. Fls  
pink in an umbel. Growing on Shorea

5269 Arecaceae x1  
Epiphyte on Shorea. Lvs dark green,  
fls red, light orange at base.

5270 Tenkawong bahit Shoree <sup>Large</sup> <sup>5</sup> <sup>Stems</sup>  
Tree 30m. Buttresses 1m up, 1m at base.  
Bark smooth, slightly flaking, brown, very lichen  
pockmarked. Lvs leathery, smooth, midrib  
and veins below yellow. Fruit 2 cm across at base,  
8 cm long. Wings 6 x 2 cm, red. (DNA)

\*5271 Crusty blue lichen from branch  
of Shoree (5270). Covering almost  
entire branch.

5272 X8 (DNA)  
Vatica - Tree 25m, 70 cm dbh.  
Bark brown-gray deeply and widely longitudinally  
fissured. Inner bark brown, wood light  
brown. Lvs matt green. Midrib and veins below  
rusty orange, red gland on some lvs. Fruit brown,  
1.5 - 2 cm across. Green x-section with  
a ring of "glands" releasing resin around  
cotyledons.

5273 Crabapple X5 (DNA)  
Emphyta on Vatica (5272) Bark brown,  
heavily lenticelled. Lvs leathery, 2° veins  
visible but not prominent. Fruit orange-red,  
15 numerous orange seeds.

5274 Xanthophyllum Polygalaceae

Tree, 10 m, slender. Bark thin, brown, heavily lichen patched. Inner bark red brown, wood yellow. Fruit 2 cm long, <sup>light</sup> orange. Testa dark orange, cotyledons bright white. (DNA)

5275 Loranthaceae - Fls only X2

Parent, corolla red, black at apex. Filament red below, yellow above, as are anthers. Style brown. Stigma black.

5276. Euphorbiaceae

Shrub, 3 m. Bark dark brown, deeply and narrowly fissured. Lvs thick, leathery, dark green. Fruit greenish light green, three lobed with persistent calyx. One seed per lobe.

\* 5277 - Lichens from leaves of Euphorb.

5276

\* 5278 Moss on log at top of ridge

x5279 Blue thallus lichen on buttresses  
of Shorea

5280 Fern - Terrestrial. On ridge top x2

5281 Fern - Climber. Only a few leaves x1  
w/ spores

5282  
\* Leave lichens and moss from upper canopy  
of Dipterocarpus.

\*5283 Moss clump from fallen branch

5284 Morus Elmaceae. x10 (DNA)

Tree, 20m, 30 cm dbh, slightly fluted.  
Bark grey, black flaking. Twig bark brown.  
Inner bark fawn brown, wood yellow. Sap  
from cut parts yellow. Leaves stiffly coriaceous  
dark above, light below. Panicle 3 cm diam, with  
persistent calyx. Seed within yellow

5285 Ficus x10

(DNA)

Climber. Bark red-brown, white latex from cut parts. Bracts persistent on fruit. Syncarp 3 cm diam, green, "bullate"

5286 Uillongkue - Apocynaceae x8

Climber. Bark red-brown. Lvs venation visible but not pronounced. Fruit to 8 cm diam, ripening yellow. Seeds inside surrounded by sweet yellow flesh - sampled after fruit.  
on Shorea

5287 Uncaria Rubiaceae x3

Climber. Bark grey, stem hollow (arts?) Lvs and fruiting leaves light green. - on Shorea

(DNA)

5288 Orchidaceae x3

Epiphyte on Shorea

(DNA)

\* 5289 Fungus

Bract fungus on fallen branch. Red brown above w/ 5 mm white margin, white below

# STEEP SLOPE

5290 Colastraceae X10

Tree, 8m, 15 cm dbh bark gray, smooth, lichen patched. Leaves and young branches light green. Fruit 3 angled, still green and immature, 8 cm long. Seed: packed vertically in wings, 1 cm x 1 cm, cream colored. (DNA)

5291 Vatica X3

Tree, 25m<sup>(1)</sup>, 30 cm dbh. Bark grey, rough-flaking. Young twigs, petioles and leaf rachis with rust indumentum. Fruit about 2 cm across, 2 winged, wings 4 x 1.5 cm, red. (DNA)

5292 Shorea Mor. x8.

Tree, 20m. Buttresses 1m up, 1m out. Bark red brown, shagbark, widely fissured. Inner bark red brown, wood white. Young branches red-brown, heavily spotted w/ white lenticels. Leaves light green below w/ yellow 2 cm. Fts immature, wings red green (DNA)

5293 Adiantum Annonaceae x8

Climber or Vatica (5291). Bark light brown. Fruit green containing white seeds (DNA)



\*5294

Lichen on *Shorea* (5292)

Right gm of white fruiting bodies, 2m diam.

\* 5295

Bract figs on small tree trunk, 20cm dbh.

Orange above, yellow below with black

"hairy comb" of fruiting parts starting about  
5mm from margin

5296 *Aglaia* Meliaceae X1

Shrub, 1m tall. Bark brown. All young  
parts covered in red indumentum. Fl-  
buds green, open fls yellow. (DNA)

5297 *Alpinia* Zingiberaceae X1

Herb, 30cm. Stemmed bran, long  
grn. Inflor. red, fls yellow-orange

5298 Zingiberaceae X1

Herb, 70cm tall, Inflor. red

5299 *Lasianthus* Rubiaceae X5

Small tree. Bark gray-brown. Young twigs  
and undersides of leaves with silky  
orange-red indumentum. Bark 1cm across, orange  
brown.

5300 Fam. Euphytic on buttresses  
of a Huge Shore X4

5301 Unknown X1  
Shrub, 30 cm tall. Stem 1 cm thick,  
Fruit 3 capuled, 1.5 cm across, stalk 6 cm.  
Only one seen...

5302 Moss from rotting fallen Shorea

5303 Threecore X8 (DNA)  
Tree, 30m, 60cm. Bark grey (light) inner  
bark white-yellow, wood white. Outer  
bark smooth. Turbark red-brown. Fruit  
brown w/ green brown warts, 7 x 5 cm. In x-section  
1 cm seemingly "vesicled". App. 3 loculed, 2  
aborting, the 3rd with one large cream-  
white seed. [Lvs lustrous]

5304 Pecan Melastomaceae X8  
Tree 10 m, 15 cm dbh. Bark dark brown, smooth.  
Inner bark cream, wood white. Bark thin.  
Fruit 1 cm x 1 cm, green, warty. 4 loculed,  
each with numerous tiny brown seeds (DNA)

5305 Melastomataceae X3

Herb, 10 cm tall. Lvs dark gm abv w/ long black hair. Lvs light gm glaucous below. Rachis of inflorescence red, calyx tubes gm white (DNA)

5306 Pinanga - Araceae X4

Shrub, lvs 1 x 1.5 cm, white below, green on the flattened top. Seed light orange inside w/ orange marking (DNA)

5307 Begonia Begoniaceae X4

Herb stems and inflorescence darkish red, lvs light gm. Fls dark pink. Fruits gm w/ vertical red stripes (DNA)


5308 Fern

X4

Terrestrial fern, 1.5 m tall.

5309

Melastomataceae. - only fls available  
Climber. Fls clustered along stem. Bk dark brown. Fls light purple, anthers bright yellow.

5310 Orchidaceae  x1  
Saprophytic orchid. Stems black-brown,  
flaves piking through bud, white.

5311 1 x 0.5 Rubiaceae x1  
Shrub 40 cm tall, bark dark brown.  
Fruit 1 x 0.5 cm.

5312 Artocarpus Annonaceae x2  
climber on ~~Artocarpus~~ <sup>perennae</sup> Bark black, lvs  
dark gm. Frts 5 x 3 cm. <sup>hard</sup> Seeds covered in  
sandy white covering (DNA)

5313 Rosaceae - Arura? x8  
(DNA)  
Tree, 20 m, 35 cm dbh. Bark light grey,  
lenticelled, cracked. Inner bark red-brown.  
Wood yellow-white. Leaves light green.  
Fruit waxy brown and dark brown, to about  
5 x 2 cm. Seeds cream white skin.

5314 Euphorbia? Annonaceae (DNA)  
Climber, Bark light red-brown  
Lvs mouth, leaves and young tips  
covered in sandy brown waxy substance.

\*5315 Lichens on leaves of  
Annonaceae, (5314)

\*5316 - Bracket fungus on side of  
large living Shorea (35 m, 120 m N.H.)

\*5317 bracket fungus on rotting fallen  
branch (of Shorea?)

5318 Medinilla (DNA)

Climber on Dioscoreaceae. Bark lightish  
red-brown. In this species all leaves  
tinged purple on 40 to 70% of leaf  
surface, inflo. rachis orange red.  
Fls green, persistent calyx red. Numerous  
white seeds in fruit.

5319 Annonaceae x8 (DNA)  
climber on Connamum. Bark dark grey,  
Twy bark red-brown. Lvs glossy gm above,  
light below, leathery. Flowers buds dark  
golden-brown. Buds and fls strongly aromatic.

5320 - Shorea / Hesper

(DNA)

Tree, height uncertain. Bark dark-gray.  
Less small, light green fl. buds green.

Thursday Jan 26 1995

Collecting in v. sloping area leading from  
ridges down to stream

5321 Loranthaceae X1

(DNA)

Parasitic on Meranti, bark light grey, thin  
lvs. thickly leathery. Fls 4 cm long, light  
red, black at apex

5322 Annonaceae

X8

(DNA)

Climber on meranti, bark red brown, strongly  
henticelled. Young branches and midrib of leaves  
with light rusty red caducous tomentum  
lvs. dark gm above, glaucous below. Fls buds  
yellow brown with scurfy indumentum.  
Fruits 3 cm long, 1.5 cm wide gm-brown. Seed  
in white testa, embedded in pithy yellow  
flesh.

5323 Lithocarpus Fagaceae

X1 (DNA)

Tree, 25 m? 40 m tall. Bark light-grey  
shallowly longitudinally fissured. Inner bark  
red, wood yellow. Young twigs light gm below  
w/ yellow midrib. Fls 11-13 cm sessile.  
Cups very grey-green, nut gm.

5324

# Rusts and lichens from Lithocarpus 5323

5325

# Lichens from bark of Lithocarpus 5323

5326 Nepenthes X6 (DNA)

Epiphyte on Morantia, Tiram 15 x 5 cm,  
3 angled, red-green. Frith 7 cm x 0.5 cm,  
green, containing numerous seeds. 4 calyx lobes  
prominent and reflexed, about 5 mm long.

5327 Glochidion Emphorbiaceae

Tree, 10 m, 30 cm dbh. Bark black and brown-gray,  
vertically cordately striate. Inner bark red, wood  
yellow brown. Lvs ~~very~~ hairy below, light green,  
dark green above. Young twigs w/ a dense white  
indumentum. Pedicels 3-4 cm long. ~~Calyx~~ Sepals  
6, green, or then yellow. Fruits 0.5-1 cm across,  
opening red. Seeds still immature

5328

Moss on branch

5329

Rust and lichens on leaves of Glochidion  
(5327)



\* 5330 Bark lichen from Ylo shidian  
(5327)

5331 Shorea mm x10 (DNA)  
Tree, 15 m, 45 cm dbh bark reddish, flaking.  
Young twigs red. Lvs light gm. Nut 3 x 2 cm.  
Wings about 8 x 2 cm. Common tree. Butterflies  
2m up 2m up. Wood pink red.

5332 Artocarpus - Moraceae x10 (DNA)  
~~Climber on Shorea~~ (5331) Bark black / thick  
grey deeply fissured. Twigs red brown w/  
orange lenticles. Lvs light green above and  
below. White latex. Fruit from cut part  
Fruits 4 x 3 cm, green, yellow in x-section.

5333 Annonaceae (DNA) x2  
Climber on Shorea (5331). Bark  
dark brown to light grey. Young twigs red  
lv undersides covered in persistent  
upward-pointing. Fls 2 cm across. Tepals green, reflexed  
fully. Corolla yellow, orange, covered in  
sticky brown exudate - pollen capture. Anthers  
yellow, bundled to side.

5108E

5334 Rutaceae x4 (DNA)

Climber on Shorea (5331). Bark gray, vertically ridged striate. Younger branches up black, smooth bark. Young shoots and lvs light green. Fls light green inside fold of corolla like yellow. In the white.

5335 Orchidaceae x4

Epiphytic on fallen branch. Max. imbric. Fls white, 3-5mm long

5336 Orchidaceae x6

Different species of tiny orchid found beside 5335, epiphytic on fallen branch. Fls white, 1.5cm. (Fls glabrous, 5-7mm long)

5337 Hymenophyllum (?) Fern x1  
Terrestrial fern. V. dark green N dark brown leaf stalks

5338 Forchert fragus on rotting log. Black above. Grey below with rusty, slimy patches of brown growth, generally about 4 x 1 cm.

5339

\* brilliant green crusty lichen from specimen of young Medicago, 1 cm dia.

\* 5340

Leaf lichen from Anisophyllea disticha  
Rhizophoraceae

\* 5341

Bracket fungi from rotting log.  
orange, light and dark brown mycel.  
above. Below grey with sub-epidermal  
grey dots

5342

Fern Lindaea? X1  
Terrestrial fern, 30 cm tall.

5343

Rubiaceae DND X1  
Terrestrial shrub, 50 cm tall. Lvs

dark green above, below roughly hairy.  
fls green outside, cream white inside. Top of  
very purple.

5344

Orchid. epiphyte or Diplazium.  
Fls 4 cm long, translucent green-yellow, centres  
yellow.

5345 Saprophytic orchid x1  
15 cm tall, stem brown. Flower fls buds  
white.

5346 ~~Rubiaceae~~ x5 DND

Small shrub, 40 cm tall. Bark dark brown.  
Lvs white-green below w/ darker green  
vms. Sepals 5, green. Petals white, reflexed  
between them. Sepals 2, yellow, white  
ones above, style protruding through,  
tornulent white. Pse on slope to white  
creek

\*5347

Blue green crusty lichen from Yang  
Dacrydium bark. Lichen here seem to  
face SW

\*5348

Green crusty lichen from n/s Sapindaceae  
bark

5349 Mimosa x6 -

Shrub, 2 m tall. Bark red-brown. Lvs  
leathery, dark above, light below. Fruit  
green, smooth w/ one white seed. Fts  
ramiflorous.

DNA



5350 - Ph Ao Diospyros DNA X10

Tree, 15m, 40 cm dbh, fluted at base.  
 Fruits pinnately cauliflorous toward bottom of  
 stem. Bole watery from cauliflorous infl. bases  
 Bark d. deep black. Stems yellow green, light  
 green below, dark above, 40x15 cm. Fruits 30x15  
 cm, slightly oblong, calyx lobes persistent, small (1 cm  
 x 5 mm), adpressed to fruit. Segals about 12, 4x1 cm  
 and radiating longitudinally from center. Testas  
 white, flesh translucent cream yellow, embryo white.  
 Fruits seemingly injured at tip. Found by small creek  
 at bottom of hollow. Only as seen.

5351 Asplenium X1

Epiphyte on Diospyros

5352 Asplenium X3

Terrestrial fern creek bottom

5353

Leaf lichens on Diospyros (5350)

5354. Fern X4  
 Terrestrial fern by creek bottom

5355 1xora x1 (DNA)  
Shrub, 1m. Lvs light below, dark above.  
Fruit 3x2 cm, ripening red. Seeds two.  
Testa green and brown. ♀

5356 Thaenaceae x1 (DNA)  
Shrub, 3m. Leaves leathery, bullate, light  
on below. Frt brown, warty green. Stems  
2-keeled peristyle reflexed

5357 Linum (?) Fern  
Terrestrial fern.

5358  
Terrestrial fungus. Stalk 10 cm,  
fruiting body 6x3, black above, grey  
below.

AS 359 (RIDGE)  
Crusty blue-green lichen from bark of  
young Conocarpus, 15 cm dbh

X 5360  
White fungus on leaf litter  
on ridge

\* 5361

White fungus on stem of climber

\* 5362

Terrestrial fungus. Black above  
fritting body, grey below

\* 5363 ~~Thalictroid~~

x3

Terrestrial toadstool. Neatly yellow stalk,  
8 cm long, tapering from base. Top of  
mushroom orange-yellow. Gills white-yellow.

\* 5364

Bracket fungi on standing rotting (dry) logs.  
Bracket black above w/ 3 mm pink margin,  
pink grey below. Fritting bodies minute, pink-ochre

5365 Ekrantaceae

x2

(DNA)

Tree, 6 m, 15 cm dbh. Bark smooth, light  
grey. Leaves stiffly coriaceous, prominently  
thrued. Fls yellow. Frt 10 x 8 cm, green  
brown. Frt 5 mm thick, 1 huge seed.

\* 5366

Bracket fungus on rot of tree. 8x6 cm  
Above rings of veins brown and white. Under  
surface and stalk white.

\* 5367

Fungus on stem of young sapling, Sam  
dih. Also found on creeping  
Eurycoma longifolia.

5368 Ixora Rubiaceae (DNA) X 2  
Shrub to 2m tall. Bark red-brown, inner  
dark green above, fls orange-scarlet, 8 cm long  
3 across

\* 5369 Leaf blemish from Ixora (5368)

\* 5370

Fungus

X 7

Bracket fungus on large unbranched  
tree. Brown above, chalk white below.  
Numerous to about 1m from base of 20m  
tree (Pillaria? Bark red, lamellated).



5371

Corymborkis Orchidaceae X1

(DNA)

Terrestrial orchid, 70cm tall. Frith gm.

RIDGE TR5372 Dacryodes

Burseraceae

Tree, 4m, 60cm dbh. Bark dark gray, smooth. Lvs stiffly coriaceous, light gm. Frits 3x1cm, yellow-green. Endosperm inside seed light avocado green.

5373

Bracket fungus on very rotten trunk

x 5374

Toadstools at base of rotting trunk

x 5375

Moss growing on buttress of tree, 15m tall, 30cm dbh

x 5376

Dried fungus on rotting trunk. Fruiting bodies purple, pear shaped, black inside

x 5377

Bracket fungus on same rotting trunk as 5376. Orange-brown above, white below.

5378

(DNA)

Tree, 4m. Bark dark gray, smooth.  
Young leaves green, these and morpho midrib  
of leaf underside w/ white hairs. Ffr  
ripening orange, about 5mm diam

\* 5379 Fungus on rotting branch. Creeping,  
gray brown with white margin. Grey-brown  
part seems to be the sporophore.

\* 5380

Brown-tinted, creeping fungus on  
rotting branch

\* 5381 Fungus x1  
found on rot along ground. Grey white  
above and stalks, gills below white

\* 5382 Fungus  
small like fungus on rotting twig

\* 5383 Brown-gray thallus lichen on bark  
of Shorea

5384 Macaranga Euphorbiaceae DVA X 3  
Tree, lvs. Lvs. dark green above, glaucous below. Kt. h.  
waxy blue green / <sup>st. lvs.</sup> sparsely green on edges.  
Seeds red - visible when fruit splits. Youngest  
lvs. occasionally not trilobed like older ones

5385 Fern X 2  
Epiphytic fern on Meranti (Shorea), found  
on a ridge top.

\* 5386 Moss  
Epiphytic on Shorea

\* 5387 Moss  
Killer from tree

5388 Bulbophyllum X 2  
Epiphytic orchid on Shorea, (1) but  
white

5389 Brachy fungus  
\* Fungus on rotting twig. Black above,  
pink. white below.

5390 Polypodium Fern  
Epiphytic on Shorea

5391 Mallotus Euphorbiaceae x8  
Tree, bark ~~10~~ cm dbh. Bark light-grey,  
wood cream-yellow. Lf undersurface  
of rough in dimention. Fruit 2 cm across,  
pichles short, styles 1 cm long. Seeds of  
red-brown testa, white inside. (DNA)

5392 Moss

Growing on shore branch

5394 Locanthaceae x 6 (DNA)  
Parasitic climber on branch of shore  
Tendrils light grey w/ red lenticels  
Lvs leathery green. Fls yellow, fleshy,  
single seeded. Seed light green w/  
white vertical stripes (6 off them).

5395 Asclepiadaceae Papd(?)

Euphyte on Meant. Lvs fleshy + thick,  
light green. Fls in an umbel, semi-transparent  
pink white.

(DNA)

5396 Diospyros Ebenaceae x10

Tree, 8m, 15 cm dbh. Bark black, brittle.

Lvs dark green above, light below. Fruits 5 x 5 cm, calyx persistent. Sepals 3, each bilobed 1/3 up rounded, then lobed and inverted at top. Inside of fruit of yellow-brown sap.

Seeds about 12. Seeds inside semi-translucent. Fruits can be eaten in 1, 2, or 3's

and nuts

5397 Lichen on leaves of Diospyros (5396)

5398 Lichen on bark of Diospyros (5396)

5399<sup>x10</sup> Gymnocarpha - Myristicaceae. <sup>thick</sup> <sup>pink</sup>

Tree 15m, 10 cm diam. Reddish exudate from cut parts. Young leaves red-brown vertically striate. Lvs light green below. Fls yellow-orange, 9 stamens or hairy aroma, sweet, musty, healthy good. (DNA)

5400 Antidesma Euphorbiaceae x3

Shrub, 2m. Bark gray, peeling in faint

longitudinal strips. Stipules large, deeply 3 x 2 cm. Lvs light green below. Inflo. to

20 cm long, 4-5 cm long, single seeded.

(DNA)

5401

Booth fungus in soil

5402 Orchidaceae x1

Epiphytic orchid. Lvs green below,  
red-brown above. Fls 5 mm, white

5403 x1 Orchidaceae ( ) ?

Epiphytic orchid. Infls. light green

5404 Orchidaceae (Tillandsia?)

Epiphytic orchid. Lvs fleshy.  
Petals white, yellow below.

5405 Asclepiadaceae Hoya

Epiphytic. Lvs fleshy. Fls 2 cm umbel,  
yellow-pink

Pl. Jan 27

265m - Cutting block

$0^{\circ}43'22.5''$  /  $112^{\circ}50'37.5''$

5406 Aglaia (DNA) Meliaceae x10

Tree, 15m, 25cm dbh. Bark light grey, lichen  
patched, thin. Inner bark red and green. Wood  
yellow. Young branches brown. Young leaves  
petioles and undersides of leaves covered with  
red stellate indumentum, lvs light green

5407 Araceae (DNA)

Epiphyte. Leaves 1.5m long. Spadix 20 x 7 cm  
yellow.

\*5408

Lichens from bark of Aglaia (5406)

\*5409 Leaf mites from yg lvs of Dacryodes

5410 Malloms - Euphorbiaceae x6 (DNA)

Tree, 5m tall, 10cm dbh. Bark light grey,  
smooth, thin, inner bark red brown. Wood  
yellow-brown. Lvs clustered at wing  
apices in pinnate panicles, light green & glab.

Frts 3cm across, spring. One seed per  
locule. Teste light green, seeds white

5411

Epiphytic fern on Mallotus

5412 Brown crusty lichen on Annonaceae bark

5413 Epiphytic fern from Mallotus

5414 Mosses on buttress of Shorea \*  
↓ 10m A hollow above stream!!!

5415 Lichen community from upper  
canopy branches of Shorea (bark)

5416 Orchidaceae X1

Epiphytic from upper canopy branch of Shorea  
Lvs succulent, warty, dark green and red.  
Fl. buds blood red, fls red-white

5417 Orchidaceae X1

Epiphytic from upper canopy branch of Shorea  
Lvs light green, succulent. Fls succulent,  
green, with red in throat



5418 Orchidaceae

x2

Epiphytic from upper canopy branch of Shorea.  
Lvs light gm, succulent. In fl. basal,  
buds white.

\*5419 Moss

Epiphyte from upper canopy branch of  
Dipterocarpus

5420 Hernandia (DNA) Melastomataceae x8

Tree, 5m. Bark light gray, thin, smooth. Twig bark  
light red brown. Lvs very light gm, below. Frs  
1cm across, light gm w/ persistent style. Surface  
warted. Style persistent x-section: 4-lobed,  
each lobe w/ numerous small seeds

529

5420 <sup>529</sup> Orchidaceae

x8

Epiphyte on Shorea Stem and lvs green,  
Inflo terminal, fruits gm, 4cm long

5421 Fern

(DNA)

x6

Epiphyte on Shorea

5422 Fern

x2

Epiphyte on Shorea

5423 Begonia Begoniaceae X5 (DNA)  
Terrestrial Herb. 20 cm tall. Lvs dark gm  
above w prominent red leaf spine, 21 below  
w adpressed indumentum on midrib and 20 vns  
Petals white, pink above

5424 Melastomataceae (DNA) X5  
Shrub, 1 1/2 m tall. Bark w scurfy, grey brown  
indumentum. Calyx tube reddish below,  
gm above. Petals white; filaments green.

5425 Rubiaceae X5 (DNA)  
Shrub, 50 cm. Bark gm w old  
brown indumentum. Inflorescence 4 cm long.  
Open fl. funnel, white, corolla lobes reflexed  
30°.

\* 5426 White fungus on fern frond

\* 5427 fungus <sup>Trachysphaera</sup> on climber. Black, red  
above fruiting body, pink white below

\* 5428 <sup>acellamine</sup> Trachysphaera on petioles of rosette  
leaves of Shorea

5429 Moinda Rubiaceae (DNA) x 1

Tree, 4m, 10cm dbh. Bark grey-brown (light smooth, thin. Inner bark brown, thin. Wood yellow. Leaves light gm. Fruits dark green, compound. Individuals for all are seeds. Seeds semi-transparent white in x-section.

5430 Apocynum Euphorbiaceae (DNA) x 8

Tree, 3m. Bark darkish gray. Lvs small, 10 x 5 cm. Fruits ramiflorous, red. Seeds w/ orange test. Embryo light gm in white hard flesh.

\* 5431 Bracket fungus. Bran and white ringed above bran-gray below. Found on fallen rotten log.

SLAVE ↓ ↓ ↓

\* 5432 Toadstool growing on bole of Living Shorea (Mgt). Stalks up to 2 cm long, holed so that cap faces upward. Cap dull yellow-brown above, orange below.

5433 Goniathalamus Annonaceae x 10 (DNA)

Tree, 15m 25cm dbh. Bark grey-black, smooth, odor from slash strongly oily-aromatic. Lvs dark gm above, light below w/ red midrib.

Trigs red-bram w/ green bracts  
Lower sepal whorl green, upper yellow  
golden

\*5434 Leaf lichen from Goniathalamus  
(5433)

5435 Samanea Samanieaceae X1  
Shrub, 1.5m. Bark grey-green, smooth.  
Fls just about soil. Calyx, pedicels  
5 cm long. Sepals green hairy. Corolla  
3, green, smooth. Styles persistent. Scales  
like hairs on midrib and on above and  
below leaf. (DNA)

5436 Piperaceae (DNA) X2  
Climber on Ipomoea grandistipulata.  
All parts light gm. Inflo. 3 x 1 cm, stigmatic  
remnant brown

5437 Melastomataceae X2  
Herb. 20 cm tall. Inflo. rachis light matte  
scarlet red. Calyx tubes gm.

5438 Rubiaceae (DNA) x1

Shrub, 60 cm. Stem gm and brown. Lvs  
light green, smooth. Fruits in a terminal  
head surrounded by numerous bracts

5439 Icacinaeae? x5 (DNA)

Shrub, 1 m tall. Bark light gray brown.  
Lvs light green, thinly leathery, smooth.  
Fls white. Stamens numerous, 2 lobed

5440 Rubiaceae x1 (DNA)

Shrub, 1 m. Bark light gray-green.  
Fruits light pink, green above.

5441 Orchidaceae x1

Epiphytic orchid

5442 Syzygium Myrtaceae x8 (DNA)

Shrub/small tree, 7 m. Bark light gray,  
thinly vertically striate. Wood yellow. Lvs  
dark green above, light below & white green  
of the underside, showing with 2 calyx remains!!!  
Waxy white, 1.5 cm diam. Seed 1, semitrans-  
lucent white.

5443 Lawsonia Litsea <sup>(DNA)</sup> X 3  
Small tree, bark red-brown, vertically  
striate. Lvs. dark green above, glaucous  
white below. Frt. fleshy cream-green,  
seed red, white in transparent white semi-firm  
"jelly" - aromatic smell.

\* 5444 Leaf lichen from Litsea (5443)

5445 Dacryodes Burseraceae X 5  
<sup>(DNA)</sup>

Tree, 5m. Bark grey-green, smooth; inner  
bark green, wood yellow. Fruit opening  
light red, 3x1 cm, endosperm light  
brown. [5 cm dbh].

\* 5446 Baccharis fungus from rotting log  
✓ WET CHILLI BATTAM ↓

5447 Zingiberaceae X 3  
Lvs 50 cm long. Inflr 10x6 cm, whitish  
Fls white, 3 cm long, stamens 2, gm.

5448 Androtium? fern X 3  
Epiphytic fern, 2 m from ground on  
tree in swampy area.

Bract

- \* 5449 ~~Leaf stalk~~, a rotting branch  
in swampy area. Fingers folds in on itself,  
brown above, ~~brown~~ white below, some on  
black stalks

- \* 5450 Bractlet fungus encircling rotten  
twig. Orange-brown above, pink-ochre  
below

- 5451 Euphorbiaceae DNA X4  
Shrub, 2m. Bark light grey. Frit 3x2 cm, light  
orange, fleshy. Frit 3-lobed, no white seed  
per lobe.

- \* 5452 "Ore" shaped fungus on rotting wood.  
Black white thin and 2mm thick and sticky  
black on the inside, rest of x-section  
white.

- 5453 Annonaceae DNA X2  
Growing at bottom of gully in swampy area.  
Tree, 15m, 35 cm dbh. Bark grey-brown-black  
(dark). Fruits to about 8 cm diam, each  
w/ one seed. Kind of fruit 5mm, yellow  
"flesh" forward centre. Fruit caniferous.

5454 Lichored leaves from Annonaceae  
(5453)

5455 Antidesma Euphorbiaceae X3  
(DNA)

Tree, 3m. Bark gray, vertically fissured.  
Leaves very large, to about 40 x 20 cm.  
Inflo. to about 25 cm long. Flowers  
light scarlet, flattened, 3 x 1 cm

5456

X Lichored lvs of Antidesma (5455)

5457 Gnidithalamus Annonaceae X1  
Still in the bag. Tree, 3m. Fruit 5 x 1 cm,  
clawed, glaucous. Bark dark gray-brown, leaves  
thinly coriaceous, light green

X 5458 Moss

Growing on leaflets of a Legume  
(Soracca?)

5459 Sauvignia Sauvignaceae X3

Still in bag. Tree, 2m, bark light grey-  
brown. Inflo. cantharous, fls red below, white  
above



5460 Pandanaceae x1

Epiphyte 1.5m from ground on small tree in boggy area. Also found @ 4m tall working up a big tree

5461 Diospyros Ebenaceae x1

[Box] still...

Tree, 3m, bark dark black. Lvs dark abn, light blw Frt 1, 4x3 cm, dull gm.  
150m from start of bog to a rice stream

5462 Gesneriaceae x2

Epiphyte in boggy area. Calyx deep crimson, corolla red w/ black stripes. Leaves light green, fleshy

5463 Osanraia? x6

Tree, 3m. Twigs gray-green. Fls, young twigs and vms above and below leaves w/ scaly hairs fls axillary. Calyx green, petals white. Stamen & anthers yellow. Styles white.

5464 Psychotria Rubiaceae (DNA) x6

Tree, 3m, slender. Bark smooth, brown. Frt 1 x 0.75 cm, dark gm w/ vertical light green stripes

5465

Lichens and leaves of Ischaemum (5464)

5466 Urophyllum Rubiaceae (DNA) x 6  
by stream-side. Tree 5m. Bark chocolate brown-  
black. Young twigs spongy hairy. Frts green,  
smooth. Lichens small, numerous. Lichens and mosses  
numerous on tree.

5467

Lichens and moss on leaves of Chrysothamnus (5466)

5468 Piperaceae (DNA) x 5  
Climber on Urophyllum. Young stems white-hairy.  
Inflo to about 15 cm, brick-red color

5469 Zingiberaceae x 1  
Herb 1m tall. Yg lvs red. Inflo. red,  
8 x 4 cm. Frts white-pink, 3 x 4 cm

5470 Elaeocarpaceae (DNA) x 6  
Gynodioecious tree

Tree, 10m, 10cm dbh. Bark dark red  
brown. Wood yellowish-brown. Inflo. to 15cm  
long. Bracts 3 winged, red, 15 x 5 cm.  
Seeds flattened, pitted long, in dorsally  
in wings of fruit.

5471 Ochroleaceae

x1

Bulbophyllum - Euphyllia or Cebastaceae  
(5470). Fls 5 x 3 cm, yellow w/ red dots  
[PHOTO] [Living collection] (Can't press  
thin one....)

5472 Ficus Moraceae

x5

Tree, 10m, 15cm dbh. Bark darkish gray  
White latex from cut parts. Fruit catkins  
in clumps of about 10, inflorescence on 7 cm  
stalks, pedicel 3 cm then. Fruits brown. Growing  
on river bank (265m)

x5473 Leaf lickers for Ficus (5472)

5474 Unknown

x7

Clusia or Ficus. Leaves leathery, stringy  
"latex" as broken halves are pulled away  
fls red, catkins, with gynophore. Fives bark.

x5475

Dense moss and lichen flora on leaves  
of 5474

x1

5476 Cyperaceae. By river. Thick  
herb, 70 cm tall, inflo from base. By river  
bank

5477

"Filamentous" yellow orange fungus on a rotting root.

5478 Euphorbiaceae

Shrub, 3 m. Bark light grey. Frts 2 cm diam., light dull gm, splitting into three. Each carpel w/ one dark brown-grey seed. Leaves heavily invested w/ moss and lichen.

5479 Spring mosses from Euphorbiaceae (5478)

5480

Moss - sporing on herb

5481 Gloriosa - Zingiberaceae

Herb, 40 cm. Stems red-brown (dark). Lvs dark green. Infls red. Fls orange 6 cm long. X 2

5482 Delicate white ~~foam~~ stalks on rotting wood. Stalks red-brown, 6 cm. Caps ~~dark~~ semi-translucent cream-white, 6 cm across. Cyls white below surrounded by small flies.

5483

Chestnut brown to black on rotting wood, brown white below. Petiole upturned at first and reflexing out as they age.

✓ [ SLOPE ] ✓

5484 Coniaceae - Elaphoglossum (?) X 7

Small tree, 5m. Bark black, vertically striate

Fruits occurring singly on branches, green, globose, 2 cm diam. 3 seeds, semi-transparent white. Black ant cover mat fruit. (DNA)

5485 Meliosma Schizaceae (DNA) X 10

Tree, 8m, 15 cm dbh. Bark light grey-brown thin, with sparse orange lenticels. Wood light yellow-brown. Fls small, yellow. Fruit 3 x 2 cm, green. Fleshy to 5 mm. Flesh reddish on exposure. Seed 3-angled, 1.5 cm green, hard. Endosperm bright chalk white.

✓ [ RIGID ] ✓

5486 Moss from buttresses of large Shorea, 3 m dbh

5487 Areaceae? (DNA) X 2

Reincker my Annonaceae - (Polka thinn)?

Stem 1 m dbh, bark grey, lvs dark gm, gradually terminal and serrated by bright young lvs. Ad, but color appears to have been white.

\*5488 Small toadstools on log. Stems 3 cm,  
blue, caps bright white

\*5489 *Brachyphyllum* growing log  
by stream. Barks black stem brown

5490 Fern - *Diplazium*  
Terrestrial fern by stream.

5491 - *Melastomataceae* X1  
Herb, 10 cm tall. Stem red, calyx tube  
gm. ALTERNATE LEAVES  
and of red in demerum.

⊗ ↙ RIVER BANK ↘ ⊗

5492 *Sandera* *relivaceae* X1  
Tree 3 m slender. Bark light gray-gray  
smooth. Lvs light gm. Fruits are  
red, 7 x 5 cm

5493 *Rubiaceae* (lower part) X10  
Trees, weeping slightly 5 m. Bark light  
gray, smooth. Lvs light gm above,  
light and hairy below. Fls 4 cm, white. Fruit  
green, 0.5 cm diam, single seeded

① → Slope →

②

5494 Orchidaceae x1  
Terrestrial orchid 40 cm high, lvs  
and bracts stem dark green, fls  
yellow w/ red streaks.

5495 Bracket fungus on rotting  
wood, pore white.

5496 Fern  
Terrestrial fern. Diplazium?

5497 Orchid  
Epiphytic orchid on Shorea. Fls  
5 x 2 cm, pale yellow, green

5498 Fern x4  
Epiphytic fern on Shorea Polypodiaceae?

5499 Gillettia Zingiberaceae x5  
Terrestrial herb, 40 cm tall. Lvs purple below,  
green above (Aak). Stems purple. Infl. red  
Flwr orange 1 cm long.

② → Looking N Road → ②

5500 Fern Asplenium x2  
Epiphytic fern on Mahoe tree.

5501

Tree, 4 m. Dying and in cutting block  
Bark grey, smooth. Corolla green-red. Calyx  
lobes persistent, red

5502 ~~Brachyotum~~ toadstools.  
Pink-brown on top, white below

5502 Gesneriaceae X3  
Epiphyte. Leaves succulent. Calyx & corolla  
red. corolla red, fruit 5 grn, 2.5 cm x 0.5 cm

5504 Labiate / Ace X1  
Herb. Fls purple, Lvs dark green above  
N short leafy green whitish below.

5505 Pinanga Araceae X1  
Arborescent, 0.5 m high. Berries white.

5506 Orchidaceae X1  
Epiphytic orchid - fls purple white



28 JAN 1995

220m Beside river - inside - check on map  
0° 44' 23.6" / 112° 50' 47.4" → RIVER  
CENTRE

5507 Melastomataceae X 3 (DNA)

Shrub on Shorea. Bark dark brown.

Young lvs ferrug red, maturing light green.  
Pedicels red-brown, 5 cm long. Calyx tube bright  
red. Petals 4, purple. Stamens 8, anthers yellow.

FALL IN RIVER ..

5508 Meliaceae Tecoma? X 10

Tree, 15m, 45 cm dbh. Buttressed 0.5m up, 1m out

Outer bark orange-brown, surface flaking.

Inner bark red, wood yellow. Leaves glaucous,  
red-haired underneath. Fls 1.5 cm, petals 3,  
white, anthers 2(?), yellow. (DNA)

5509. Staphan (DNA) X 1

Small tree, 3m. Leaves thickly coriaceous

fruits 2 cm diam all are white seed.

Bark light grey

Malcom

DNA

5510 Lepisanthium Sapindaceae x10

Tree, 8m, 10cm dbh. Bark red brown, smooth, thin. Wood cream colored. Lflets and leaf rachis covered in scales - INDIVIDUAL LEAFLETS STRONGLY RESEMBLE LVS OF

ONE AN. Infls axillary toward end of branches. Rachis and buds also covered in scales. ETiny both golden-brown.

5511 Ficus Moraceae DNA x8

Climber. Bark light gray, strongly lichen pitted. LVS dark gm above w/ yellow mottled and vms, light green below. Synicoria 5x3cm rust-orange w/ gm flecks and stiff cream-yellow hairs, about 5mm long. Fruits brown. All cut parts exuding white latex.

5512

\* Lichen off branch of Fraxinaceae (5508)  
 ✓ FLAT AREA BY RIVER - DET

5513 1xora Rubiaceae DNA x3

Small tree, 3m Bark red brown. Frb still gm

5514 Fern (Nephrodium?) x3  
 Epiphyte on large Sylocarpus

\* 5515 Blue green thallus lichen of  
major branch of Shorea

5516 ~~Ep~~ Fern X2  
Epiphytic fern of major branch of Shorea.

\* 5517 Bracket fungus of large vine

5518 Gesneriaceae X1  
Epiphyte on Shorea. Leaves fleshy, dark  
green above, light blue. Fl. buds lilac,  
dark red.

5519 Fern X4  
Epiphytic fern on large branch of Shorea

5520 Schefflera Araliaceae X2  
Climber on Shorea. Infl. rachis red-purple. Frink  
bracts orange-yellow, red-purple at apex w/ 5  
distinct style scars. Seeds 5 creamy yellow color.  
DNA

5521 Medinilla Melastomataceae X4  
Climber. Bark light grey-brown. Lvs dark  
above, light below. Fl. buds crimson-red.

(D  
W  
A)

5522 Microphora? Annonaceae x8  
Tree, 6m, 10cm. Bark black. Lvs light  
green with reddish inflexion on midrib and  
veins on abaxial surface. Fts 2 cm diam, green  
w/ white fls. Seeds like aromatic white from  
fls. DNA

~~5523 Uncaria x1  
Tree, 6m, 10cm. Bark brown, Lvs glossy  
green, venation almost invisible. Fts 1.5 cm.~~

5524 Orchidaceae - Coelogyne x1  
Epiphyte on large Shorea. Flowers 4x1 cm, white  
yellowish inside, odor sweet, fragrant, honey-like.

5525 Anacardium Schefflera x1  
Shrub. Fruits yellow. Infls. rachis with brown-  
gray indumentum. DNA

5526 Leea Vitaceae x1  
Small tree. Infls. rachis red-green. Fls about  
1x1 cm. Calyx like green, corolla yellow, anthers  
brown gray.

5527 Leaf specimen from Leea (5526)

→ (DNA)  
5530 Diospyros Ebenaceae X 12

Tree, 15m, 35cm dbh. Bark light <sup>brown</sup> tan hard, fissures.  
Lvs leathery and soft. [Wood cream yellow], Fruit  
10 x 8 cm. Calyx ~~calyx~~ very accrescent, 4 cm  
long, graying and perpendiculer to peduncle,  
then arching up 90° Frt dull orange-brown  
Seeds mine in the fruit spaced, seeds translucent  
white, Frt exuding sticky colorless exudate.

[Calyx and in fls. of green/gold/blood red indumentum]

[Bark with numerous <sup>Bark</sup> fine horizontal lenticels] <sup>Bark</sup> <sup>stipitate</sup>

\*5531 Lichens from lvs of Diospyros (5530)  
(clusters)

\*5532 Lichens from bark of Diospyros (5530)

5533 Myristicaceae Knema (DNA)

Tree, 10m, 25cm dbh. Bark light brown,  
smooth, cracking vertically occasionally, Cut  
piths exuding red sap. Young branches and underside of  
yng lvs with thick light brown indumentum. Lvs light green above, glaucous  
blue. Frts 7 x 3 cm, ylu under thick brown indumentum. Ail pinkish red,  
entire Seed 5 x 2 cm. Testa purple-black w/ ylu skin  
Endosperm white/light brown minutate. All (petals) copious <sup>red watery</sup> sap.

5534 Fern (Miclasorum?)

X1

Epiphyte. On upper surface are marked by  
large and abrupt "bumps".

5535 Labriateae (DNA) x8  
Terrestrial herb, 20cm tall. Fls white w/ a  
slight purple tinge. Lobellum w/ light green  
protrusion on each side of middle. Anthers white.

5536 Lichens off lvs of Krume (5533) / Rusty, wet

5537 Bark lichens off Krume (5533)

5538 Urticaceae (Elatostema?) x5  
Terrestrial herb, 20cm. Inflorescence  
fleshy, pink-green. Fls tiny, pink w/  
purple flecks

5539 Euphorbiaceae (DNA) x4  
Tree, 3m. Bark thin, light brown grey. Lvs  
light green, distichous. Fruits bilobed, each  
lobe w/ one green seed. Frt + dark green.  
②      ↓ SLOPE      →      ②

5540 Vitaceae x2  
Climber. Yg leaves green purple below. Yg  
stem, fleshy, berries bright red. Seed 1,  
grn

5541 Tradescantia  
Delicate seedpods on cutting reg. Stalks reddish under

cap light dusty brown, cap top orange-brown.


5542 Filamentous white fungal stalks, small,  
on a log in an advanced state of decay.

5543 *Bocconia* *Euphorbiaceae* <sup>(DNA)</sup> X2  
Tree, 3m. Bark thin, light grey, smooth.  
Lvs alternate on branch tips. <sup>white</sup> ~~calyciferous~~ <sup>calyciferous</sup> ~~com-~~  
flores, 2 condium globose. Seeds 2-3, testa  
bright orange [Fruits yellow-orange] 255m

5544 *Rubiaceae* <sup>(DNA)</sup> X4  
Tree, 7m, 10cm dbh. Bark thin, light brown.  
Lvs light green w/ yellowish midrib and  
2° veins. Frts dark green, globose 1cm across,  
1-seeded. [Wood yellow]

5545 *Antidesma* - *Euphorbiaceae* X1 <sup>(DNA)</sup>  
Tree, 7m, 20cm dbh. Bark dark brown  
inner bark reddish wood red-brown hard  
Lvs v. light green, dark above. 1-fl. stiff  
red and green. Fls ~~red~~ small, calyx dark red

5546 *Aporosa* *Euphorbiaceae* X8 <sup>(DNA)</sup>  
Shrub, 4m. Bark light brown, glabrous and  
occasionally vertically fissured. Stipules

about 8x4 m, caducous on older twigs. Berries  
 light milky scarlet, 1x0.5 cm, 4 remnants of  
 perianth visible above (black), seed orange, testa  
 orange, (raphide?), real  Embryo 4 angled,  
 flattening discus seed then later.

5547 Ardisia Myrsinaceae X5 (DNA)  
 Tree, 5 m, bark light brown-grey & slender.  
 Young twigs and midribs and veins on lamina  
 abaxial surface dark rust red color. Berries  
 globose, 7 mm diam, dull green w/ red-brown  
 longitudinal flecks

~~5548 Lichen from base of Ardisia (5547)~~

5548 Pandanus Pandanaceae X1

\* 5549 Lichen from base of Ardisia (5547)

\* 5550 Yellow jointed stalks on a living branch. Cap  
 1.5 cm across, rippled.

5551 Iridescent light green lichen on  
 bark of tree, 30 cm dbh



5552 Dillenia Dilleniaceae X13

Tree, 10m, 25cm dbh. Bark covered w/  
gm lichen, reddish below. Inner bark red, laminated.  
Wood yellow-brown. Young parts w/ caducous  
white indumentum. Fls 8 cm across. Petals  
bright yellow. Anthers white coming out in bundles.  
# carpels generally five, but some with bygone.  
Sepals green. (DNA)

5553 - Lichenred bark of Dillenia (5552)

5554 - Lichenred and rusted lvs of Dillenia (5552)

5555 - Artocarpus Moraceae X4

Tree, 8m, 20cm dbh. Bark darkish brown and gray.  
Leaves and petioles covered in dense brown indumentum,  
leaves almost 1 m long. Fruits 7 cm diam, yellow.  
Lvs dark above w/ ylw midrib and 2 veins, light green  
below, veins also ylw. (INNER BARK RED) (DNA)

5556 Lichenred and rusted lvs of Artocarpus  
(5555)

5557 Various lichen on bark on Artocarpus  
(5555)

5558 Vitaceae x1

Climber. Midrib and vms on both sides of leaf, ad petiole, with red-brown tomentum. Lvs otherwise dark gm above, glaucous below. Infl. rachis M) same tomentum, buds gm.

5559 Gonythylus Thymelaeaceae x10 (PND)

Tree, 15m ~~30~~ cm dbh. Bark dark brown, orange flaking. Lvs, inflo and yg twigs light green. Frts to ~~10~~ 10 x 3 cm, warty brown.

Seeds white. .... Yg buds and old frts going into 2nd season? (inner bark red, wood white)

5560 Euphorbiaceae (DNA) x 80

Tree, 8m, 15 cm dbh. Bark light - dark grey, wood light yellow brown, twigs white. Lvs dark green tomentum. Frts gm, 2 cm diam, 3 seeded.

5561 Blue thallus lichen from Euphorbiaceae (5560) twigs.

\* → 5586 ← \*

\* 5586 Bracket fungus, reddish golden  
brown above, dull white yellow below  
On rotting wood

\* 5562 Bracket fungus on rotting wood  
Red, brown and white ringed above,  
white blw.

\* 5563 Bracket fungus on rotting wood.  
Stalks to 5 cm, red-brown. Top of  
fungus black and red ringed, below  
white w/ purple tinged areas

5564 Euphobiaceae - Apronsa? XB

Tree, 8m, 15 cm dbh. Bark light gray  
+ thin. Young lvs. flushed red-purple.

(DNA)

Fruit x 0.5 cm, ripening reddish 3 seeds  
per fruit. In cross section one white, the other  
translucent green.

5565 Lichen from lvs of Euphobiaceae  
(5564) [AND RUSTS]

5566 *Occhudaceae* X 2  
Epiphytic orchid. Fls pale orange, 1 cm long

5567 *Rubiaceae* X 2  
Shrub. Bark brown, lvs dark gm above  
Frts dark gm, ~~1~~ 1 x 0.5 cm. Seed 1.

← RIDGE TOP →

5568 *Malvaceae Ochrostachys menteniana* 1 2  
Tree, 15 m, 40 cm dbh. Bark red-brown  
flaking - flakes  $\approx 1.8 \times 8$  cm. Wood light  
brown, hard. First branch 10 m, 1/2 way trunks  
light red. Leaves delicate, glossy green. Fruits  
~~large~~ drop shaped to globose and  
sub-globose, to 1 cm across, 1-seeded,  
exuding white latex in X-section, Great  
varnish L fruit shape. (DNA)

5569 Just and lichen a leaves of  
*Ochrostachys* (5568)

5570 Lichen on bark of *Ochrostachys*,  
(5568)

② → RIVER SIDE → ②

5571 Syzygium Myrtaceae (DNA)

Upropping over edge of river. Tree, 10m, 35cm girth. Bark light brown-gray. Yglvs flushed red. Fls from a distance appear as white cluster, with numerous butterfly flies

Swarming around them calyx tube green, 1.5cm long. Calyx lobes 6 petals caducous. Filaments numerous, cream colored, anthers yellow.

\* 5572 Aporosa? Euphorbiaceae X3

Shrub, 3m. Light grey bark, striate. Inflo up 28cm long. Fruit dark blood red w/ 5 persistent sepals five locules in fruit with between 2 and 4 abaxial & three ant apical

x 5573 Leaf lichen from Aporosa (5572)


x 5574 Leaf lichen from Syzygium (5571)  
Gard msts

\* 5575 Bark moss and lichen from Syzygium (5571)

↓ SLOPE ↓

5576 Sapotaceae

x3 (DNA)

Tree, 7m, 10cm dbh. Bark light brown, thick sap from all cut parts. Branching pattern . Young lvs flesh light red. Fruits green, 3 cm diam.

5577 Leaf ~~from~~ 1:1 diam and width from Sapotaceae (5576)

5578 Fern

(DNA)

x1

Terrestrial fern

⊙ RIVER SIDE ⊙

5579 Diaberyga ~~Melastomaceae~~ Samadaceae x2

Tree 10m, 10cm dbh. Bark dark brown going orange with age. Lvs 25 cm. Frts capsule splitting into 4. Common by river side. (DNA)

5580 Gesneriaceae

Epiphyte. Calyx scarlet red, corolla light red.

5581 Ficus

x1

Climber. Bark gray. Spines orange, <1 cm diam., globose.

5582 Anacardiaceae Schefflera x1

Climber, bark brown. Fvs green-brown, stamens in kind white.

5583 Orchidaceae X1  
Epiphytic on Tastonia Inteana Al.  
purple, 10 cm long. No smell. Living collection

5584 Annonaceae X1  
Found in pile of cut trees. Outer whorl  
yellow, inner purple, melting into flr.

5585 Annonaceae X1  
Tree 5 m. Bark thin, light grey flr  
deep crimson. Frts 1-seeded w brown streaks  
within.

5586 - ~~Reptace~~ ~~det~~ 5587

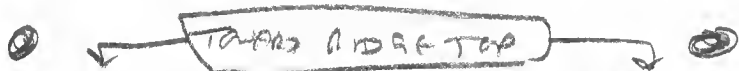
Bracket fungus. Darkish golden  
brown above, dull dirty yellow  
below. On rotting wood.

Sunday Jan 29 1995

End of cutting block. Still hilly area....

270 m

0° 43' 05.2"  
112° 50' 37.3"



5587 Syzygium Myrtaceae (DNA)

Tree, 20m, 40cm dbh. Bark red-brown, vertically fissured. Lvs. dark green, patchy. Yg. lvs. flush green. Inflo. terminal. Fruits on 1cm peduncles, fruits subglobose, 1cm long, white, no seed coat.

5588 Ficus Moraceae x8 (DNA)

Climber. Bark dark brown ~~Smooth~~ Branch persistent infructescence, 8cm long Syncarpia semile sub-globose, 2cm diam, green and orange. w/ white flecks. Fruits white and brown skin. All parts exuding copious white latex.

5589 Dacryodes Burseraceae (DNA) x8

Tree, 20m tall. Bark smoky brown-grey.

Twig bark light grey. Inflo. rachis green. Fruits ripening red. Seed are. Embryo small.



x5590 Leaf lichen from Syzygium (5587)

x5591 Bark lichen from Syzygium (5589)

⑤ ↓ RIDGE TOP ⑤  
5592 Shorea Dipterocarpaceae X10. Mm

Tree, 30m 50 cm diam. Bark light grey, deeply vertically fissured. Inner bark red, thick, fibrous. Wood pink-yellow. Lvs. dark abv, light below. Calyx + wing + fruit crimson red. Buttresses short, 40 cm up, 60 cm at. [TACT ON RIDGE TOP] DNA

5593 Fern X2  
Epiphytic fern on large Shorea

5594 Syzygium Myrtaceae DNA x4  
Tree 20m, 40 cm dbh. Bark red-bronze, flaking. Inner bark deep red, wood yellow. Young twig's deep red. Lvs leathery. Fruit light green, 5 x 3 cm. Seed yellow. Testa yellowish dark flake, adherent to seed.

x5595 Bark lichen from Syzygium (5594)

x5596 Leaf lichen from Syzygium (5594)  
barely visible

5597 Gardenia Clusiaceae DND x 4  
Tree 10m, 12cm dbh, bark dark grey, flaking.  
Yellow sap from slash. Wood cream. Yg. tinged  
green-bronze striped. Yg. sheath green. Fts 4.5 cm  
diam, 4 seeds, yellow in gm flesh.

5598 Mesua Clusiaceae DND x ~~8~~ 8  
Tree 10m, 15 cm diam. Bark light grey, slightly  
fissured, wood white-cream. Lvs stiffly  
coriaceous. Fruits to 5 cm diam, ped buff-bronze,  
flaking. Exuding yellow sap which hardens. Mesocarp  
5-8 mm thick, slightly spongy, exuding yellow sap.  
Testa white, thick. Seed green. Cement tree i  
area.

5599 Medinilla Melastomataceae XI DND  
Climber on Shorea. Petals white, anthers purple  
and white. Fts green w/ orange calyx remnants.  
Seed narrow 3x1mm, white. Bark flaking, smooth  
light red-bronze. Yg lvs flaking slightly purple.

5600 Ararusa Euphorbiaceae XI  
Tree, 1.8m. Bark smooth grey-bronze. Fls  
staring to pink, 4 cm long, with purple. Sepals  
above 5 - lvs dark green, slightly bullate.

5601 Fern DNA x5  
Epiphytic fern on large vine on large Shorea

5602 Moss  
Growing and sprouting on bole of large  
tree (sample small)

5603 Hopew? Rupt x10

Tree, 20m 15cm dbh. Bark light grey smooth,  
v. lichen patches. Young bark red. Lvs  
stiffy carinate

5604 Moss on rotting log

5605 Myrsine (Myrsine?) x2

Small tree, 5m, 8cm dbh. Bark light  
grey, smooth thin, wood yellow. Lvs light  
green. Fruit glabrous, 2-3 cm diameter,  
dark green.

① SCAPE ②  
5608 Blue green lichen from bole of large unknown tree

~~5609 Branch fungus on rotting  
stand~~

\* 5607 Bracket fungus on standing rotten  
bale of rice 45 cm diam. Dark brown  
color

\* 5608 Bracket fungi from fallen  
rotten log

\* 5609 Black creeping mold like  
bracket fungus on fallen cutting log.

\* 5610 White 'creeping' fungus on waste of  
standing rotten trunk

5611 Theaceae - PNA X10  
Tree, 20m, 45 cm dbh. Shrub at base  
Bark dark red. Brown flaking in small patches  
Inner bark deep red. Wood yellow-brown  
Leaves dark green above, lighter below, leathery  
30 ms invisible. Gland dots prominent to eye.  
Frt 5.5 x 3 cm. Lvs buff-brown. Calyx lobes  
green, persistent. See also semi-translucent white in  
white part. Frt 1 cell 5-10 mm thick, slightly  
sp. egg.

\*5612 Bark lichens from Thesaea (5611)

\*5613 Leaf lichens from Thesaea (5611)

\*5614 Bracket fungus from bole of large Shorea (120 cm dbh), 1.5 m from ground).

5615 ~~Syzygium~~ Syzygium sp. Myrtaceae x1  
Shrub, 1.5 m. Lower part of dark gray bark,  
upper part light chocolate-brown. Lvs  
dark above, light below. Fr. clustered,  
pale blue-green, 1-5 cm diam, subglobose.  
Fruit accrescent? They seem to be. Seed 1,  
flesh <sup>semi</sup> translucent white.

\*5616 Orange bracket fungus on a vine

\*5617 Leaf lichens on a palm, 20 cm from ground

\*5618 Pinki-orange bracket fungus on a vine, in soil and on other plants  
near 2 m 2

5619 Schefflera Rubiaceae x2  
Climber on Shorea. Bark light gray brown, l.fls.  
rachis red, flowers yellow, stamens white.

5620 Orchidaceae x1  
Epiphyte on small shrub

Blk River

5621 Krrema Myristicaceae x4  
Small, 5m. Bark brown. Red sap from  
cut parts. Fls small, brown. On river bank

(DNA)

\*5622 Lvs from Lichens from lvs of  
Krrema (5621)

5623 Unknown x4  
Small tree, 5m. Bark chocolate brown.  
Fls yellow-green (DNA)

\*5624  
Lichen from twig of small tree (5623).  
With fungus on leaf. Lvs white, stalks 5-10cm  
long. Sporing body 3m diameter, spherical  
5625

5626 Epiphytic fern on log

5627 Melastomataceae

Terrestrial herb, 20 cm high. Stems brown.  
Calyx tubes light green. Other fl. parts  
white.

FLAT AREA BESIDE RIVER  
DICTYOCRAPHUS common

X 5628 Bracket fungus on rotting log. White w/  
purple tinge above and spring, black below.

5629 (Chiconanthus?) Oleaceae X1

Small shrub, 0.5 m. Bark light ~~gray~~ <sup>gray</sup> for  
leaves, 50 m invisible. Fl buds light  
gm

5630 Heavily lichenized fungus small  
\* shrub by river bank - many diff. forms.

\* 5631

~~River~~ Scarlet toadstools on rotting  
leaf litter. Caps 1 cm across

\* 5632

White bracket fungus on rotting branch  
Fungus underneath branch

\* 5633 Brown fan shaped fungus on rotting  
log. Up to 15 cm across, ~~dark~~ chestnut  
brown above, white below

5634 Garcinia Clusiaceae X2  
Small tree, 3 m. Bark smooth, very dark red-brown.  
Lvs thickly leathery. Frt 1.5 cm diam., light  
glossy ~~very~~ green-white (DNA)

\* 5635 Leaf lichen from Garcinia (5634)

5636 Diospyros Ebenaceae X10  
Tree, 20m, 40cm dbh. Buttresses small,  
30cm up 40cm out. Bark black, flaking,  
hard. Wood a distinct golden yellow.  
Lvs light gr below. Frts to about 8 cm diam.,  
Seeds 6 generally around 12. (DNA)

5677 Leaf lichen and ush from  
Diospyros (5636)

\* 5639 - Weird saprophyte covers ~~ash~~ area of  
about 3m<sup>2</sup> - found occas in that area. Top of  
to 40 cm ~~gr~~ red. Fls white. Petalobase(?) fls red  
- CHECK UNDER microscope !!



5640 (Genocaryum?) Icacinaeae x2  
Small tree, 3m. Bark grey, smooth frn  
caniferous, purple-bronze, 6-8 cm long, ribbed.  
One bundle of minuscule white seeds  
clumped together. (DNA)

5641 Sapotaceae x4  
Tree, 6m, 10cm dbh. Bark red-bronze,  
dull, smooth. Wood reddish, cut path  
exuding white sap. Lvs dark green above,  
golden brown below, fruit 4x2 cm, styles  
generally persistent, seeds 1.

5642 Mammea Elaeagnaceae x1  
Tree, 5m. Bark light gray, smooth. Fruit yellow  
caniferous, 8x3 cm. One seeded fruit (reptile).  
Lvs very light green below, latex "glands"  
perpendicular to midrib - seen as 'fleckles'.  
Cut path exuding off-white sap.

5643 Chiconanthus Peaceae x3  
Tree, 6m, 10cm dbh. Bark grey, smoothish.  
Fruit glaucous, green and purple. Single seeded

5644 Andisia - Myriaceae x3

Shrub, 20 cm. Inflo. rachis bright red.  
Fr. gm, globose, ~~3-5 mm diam.~~ 5-8 mm diam.  
4-5 perianth red sepals. Seeds one (DNA)

5645 Mamea / Melastomataceae x10

Shrub, 1.5 m tall, weeping over river. Bark dark  
red-brown, thin. Lvs leathery, light gm. Fr. gm.  
Sub globose, 1 cm long, light gm, seeds 1. (DNA)

5646 Psychotria Rubiaceae x1

Shrub by river, 1 m. Lvs leathery light gm.  
Inflo. terminal, green. Fr. gm w/ white vertical  
stripes 1.5 x 1 cm.

5647 Rutaceae?

x2

Tree, 7m, 10cm dbh, still rooted.  
Lvs thick leathery, gland dotted. Fruits 5x3 cm,  
gn w/ brown warty Accrescent calyx lobes (5).  
Fruit wall ribbed, 4 processes above. # seeds 3,  
off white in yellow gummy flesh

5648 Fabaceae (Sorarea?)

x3

DNA

Tree, 4m. Bark grey, smooth, covered in mosses  
and lichens. young frs purple tinged bell.  
Legumes red-purple 20cm x 6cm, thin, at  
least 7-seeded. Growing on river bank

5649 Sapotaceae

DNA

x10

Tree, 7m. Bark red-brown. Lvs gm above,  
golden brown below. Fr 5x3 cm, gm w/  
brown indumentum. All cut parts exuding  
white sap

5650 Leaf lichens etc from Sapotaceae (5649)

5651 Flacartia rubra Flacartiaceae. X6

Tree, 5m, weeping over river. Bark brown, slightly rugose, armed. Lvs light gm fringed, 5 cm diam, red. Some closely partly eaten by animals. Tree weeping over river (DNA)

5652 Morinda Rutaceae (DNA) X 7

Tree, 4m, 7 cm dbh. Bark grey-brown, light colored, slightly rugose, wood yellow. Fts aggregated in 3's. [Fts gm, ripening purple]

5653 Fern

X1

Epiphytic on rotting log.

5654 Dysoxylum Meliaceae X1

Tree, 4m, 5 cm dbh. Bark light gray, smooth. Fl buds gm w/ red calyx (DNA)

5655 Coelostegia

X1

Tessellated flt, glaucous to base. Found in river. Another specimen only

5656 Bracket fungus - large - on rotting tree

5657

Prothidaceae

XI

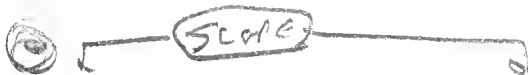
5657 *Orchidaceae*  
Epiphytic ~~to~~ orchid on tree

~~1~~ orchid on tree

Monday Jan 30/1995 260m

~~Starthrinia~~ By river

0° 45' 28.5" ) taken at 5714  
112° 51' 17.3"

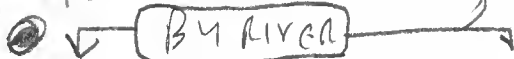


5658 Photo

Orange ball shaped bracket fungi  
Graying on vine and rotting log. Photo Up to 6 cm  
across, white within, growing in white clouds.

5659 Knema Myristicaceae DNA x11

Tree, 5m, 10cm dbh. Bark smooth, dark brown  
upwards, milky above and below on young bark  
brown ~~leaf~~ underneath fruits 4x2 cm, light  
brown. Petal white, entire. Seed white  
up brown ramifications. Fr + fragrant when cut open



5660 Saurauia Saurauaceae DNA x8

Shrub, 4m, branching from base. Bark light grey.  
Scaly hairs on young twigs. Petioles and ~~leaves~~ hairs  
old. Petals 5, white, 1.5 cm long, bilobed. ~~leaves~~  
Stamens 4, white. Anthers yellow, numerous  
by river bank

5661 Dracontomelon des Andeanum x8  
Tree, 20m tall, 60cm dbh, growing over river.  
Bark light grey, wood white. Leaf rachis brown  
red. bract, fruits yellow-green, globose, 3cm  
diam, 1 or 2 black seed. Outside of fruit with  
remaining pith (?) half-way up fruit. Common  
along river. Fruit of apple-mango flower, slightly  
tart. (DNA) [Seeds present]

5662 Morantaceae Donax x1  
Herb, 3m, terrestrial. By river bank. fr 2cm long  
style, remains perianth, seeds 1, white.  
By river bank

\*5663 lichens on lvs of Donax (5662)

\*5228)

~~5663~~ Braided fungus on rotting log

5664 Terrestrial fern x1

5665 Psilotum x1  
Epiphytic on small tree. Spores present

5666 Pearcea Euphorbiaceae (DNA) x5  
Tree, 5m, 10cm dbh. Bark grey, smooth.  
Fruit bright orange. 5x2 cm. 2-3 seeds inside,  
each in iridescent purple testa.

5667 Globba Zingiberaceae X7  
Terrestrial herb, 50 cm tall. ~~fls~~ Stems and  
underside of lvs purple. Inflorescences bright red.

5668 (Xanthophyllum) Ally X2  
Tree, 4 m, bark dark grey. ~~fls~~ Not glabrous.  
3 cm diam, green below, ~~purple~~ purple above.  
Seed length 1. Testa white. Flesh creamy  
white. Cotyledons green, junction between them  
blood red.  
(DNA)

5669 Chionanthus Oleaceae X8  
Tree, 5 m, 15 cm diam. Leaves thick leathery,  
bright green below. Fl buds green.

5670 Leaf lichen from Chionanthus (5669)

5671 White tendrils on rotting log. Up to  
about 2 cm tall and 2 cm across.

5672 Begonia X5  
Terrestrial herb, 20 cm tall. Leaves  
dark green above w/ little petioles. Calyx red-purple,  
petals white purple. Lvs light green below w/  
brown veins.



5673 Bracket mushroom. Dark brown above  
M white rim, yellow brown below.  $\frac{1}{2}$  - 10 cm across

5674 Delicate bracket fungus on rotting  
wood. Light brown above, white below.  
 $\frac{1}{2}$  - 2 cm across

5675 Begonia Begoniaceae x 1  
Terrestrial herb, 30 cm tall. Lvs bright  
red below.

5676 Gesneriaceae (cerisea?) x 8 DNA  
Terrestrial herb, 70 cm tall. Lvs green above, yellow  
below, yellow greenish purple. Bracts are a spreading  
inflorescence yellow, 6 cm long 5 cm wide, 3 cm  
deep. Corolla ~~yellow~~ light green, anthers  
yellow.

5677 Unknown DNA x 2  
Terrestrial herb. Lvs light green, fl. buds white.

5678 Selaginella x 5  
Climber, almost 1 m tall. Climbing stems, fl. red  
20 cm long, white tipped.

5679 Ruticaceae (DVA)

X5

Terrestrial herb, 40 cm tall. Lvs dark  
abv, light below. Fl buds white, fls white

\* 5680 "Jaw Ear" type fungus on rotting  
wood.

\* 5681 Terrestrial toadstool. Pure white.

Stalk 3 cm long, 1 cm wide. Cap 6 cm across,  
1 cm thick

\* 5682 Yellow "filamentous" toadstools on rattan vine

5683 Begonia Begoniaceae X5  
Herb, fleshy 50 cm tall. Stem red, lvs green  
above and below

5684 Zingiberaceae

X2

Herb, 1.5 m tall, flower on stalks, white, 3 cm  
long

\* 5685 Soft chestnut brown bracket  
fungi. 8 cm across, 4 tall.

\*5686 White toothstems on rotting branch. To 6 cm tall. Caps 3 cm across. Below caps up "mesh" rather than gills.

\*5687 Fungi on rotting branch. Spores black 3 cm long. Sporing bodies brown, 3-4 cm long 7 mm wide, like a sausage.

\*5688 ~~Yellow-green~~ Yellow-orange  
'jew's ear' fungus on rotting branch

\*5689  
Bright Orange spiny fungi on underside of  
leaf of *Engelmannia* (5684). Sporing  
bodies 4 mm across

\*5690 1 cm  
Thick/brooked fungus on rotting log. White  
and yellow below. Above white, sporing area  
mustard yellow-brown. Fungus 10 cm across at  
top, 5 at bottom, 10-12 cm long

5691 Orchideaceae

X1

Terrestrial orchid, 20 cm tall. Infl. 30 cm long, rachis green, spat. Fls 5x3 cm. Petals cream white, labellum mustard-yellow.

5692 Baccaurea Euphorbiaceae (DNA) X5

Tree 7m tall. Bark light grey, wood light yellow. Bracts light green, clustered at branch ends.

~~fr~~ Singles can be seen, to about 10x4 mm. Fruit bright yellow, glabrous, 3 cm diam. Seeds 3 seeds white in thick light orange testa. Inflorescence racemose.

5693 Orchideaceae

X1

Orchideaceae, terrestrial. Saprophyte? Grass to 1m, stem brown with dense vertical purple flecks. Bracts light grey with vertical purple flecks. Fls yellow with purple outside, yellow inside. Upper side petals with purple stripes.



5694 Acacia

(DNA)

X2

Terrestrial herb, 30 cm dbh. Spathe cream white. Fls like still young, green.

5695 Leuca - Vitaceae

X5

Small shrub. Lvs green with ~~red~~ red midrib red.

on upper surface. Fruits to about 1 cm diam,  
opening red and green. 5 seeds, yellowish.

5696 Cyperaceae (Myrmica?) x 1  
Herb to 1m, leaves with 5 cm pointed ends.  
Influence 5 cm across brown

5697 Rubiaceae Lesianthus x 2  
Small tree, 2m Lvs light green below.  
Fruit indurated blue-purple.

~~5698 Tree, 15m tall 10cm dbh. Bark light grey  
green, thin, smooth~~

~~5699 (414) - - -~~

5698 CHECK IT OUT ● (DNA) x 10  
Tree, 15m 10cm dbh Bark light grey, green,  
thin, smooth. Fts single, semi fleshy, getting to  
about 6x3cm, ripening light dull purple. Seeds 1,  
flattened, in delicious mango/pear - rambutan flesh,  
white, grain - translucent. Very inferior

\* 5699 Leaf lichens and nests from  
5698

5700 Rubiaceae - Lasianthus

Shrub, 15m. Bark light grey, smooth. Fruits  
1 x 0.5 cm, green, 1-seeded.

5701 (Synaptocarpus? ~~Synaptocarpus~~ Unknown Y)

Shrub, 1m. Bark light green-grey. Lvs stiffly carinate.  
Fruits 1.5 cm diam green, styles remain persistent apically.  
Seed green, bright white.

\* 5702 Bracket fungi on rotting wood. 15 x  
10 cm, thin. Bark brown above and below.

\* 5703 Large bracket fungus. 30 x 20 cm. Brown  
above, bright white below.

5704 Baccaurea (DNA) Euphorbiaceae

Tree, 10m, 25 cm dbh. Bark red below, light  
grey above. Leaves clustered at apices, large,  
frs cauliferous, to about 6 cm diam. Green all  
brown warts. Seeds embedded in white grapefruit-tasting  
flesh.

\* 5705 Leaf lickers from Baccaurea (5704)

\* 5706 Mosses on bark of Baccaurea (5704)

[Noesia (leaves if fruit) seen here]

[Xerospermum too]

5707 Asclepiadaceae

X1

Epiphyte fallen from large Durio. Fls white &  
7 cm pedicels. Fls themselves 1 cm across

FLAT AREA AREA FROM LIVEL

5708 Cyperaceae

X2

5709 Cleodendron Yopaniaceae X2

Fleshy shrub, 2-5m tall. Fls red frts white,  
2 seeded, in accrescent sepals. Accrescent  
sepals red. Growing in recently felled area - pioneer?

5710 Syzygium luridum Myrtaceae X3

Shrub 1m stem hairy. Fl. buds white (DNA)

5711 Leea indica Vitaceae X1

Shrub, 3m. Frts riping red. 6 lobed, one seed  
per lobe

5712 Lichens from lvs of Leea indica

(5711)

5713 Connaraceae

X2

Tree, 8m, 25cm dbh. Bark light gray  
coarse, flaking, fissured. Fruit samaras  
red, 3x1 cm. Seed in orange testa.

x 5714 Ficus brachyphylla Juncea on  
Convolvaceae (5713)

5715 Dillenia glauca Pillea manis x8  
Tree, 20 m, 35 cm dbh. Bark red. Lvs glossy  
fl. buds red. Fls. → petals yellow, stamens  
numerous yellow, purple over above, styles 6 (DNA)

x 5716 Rust and lichens from Dillenia (5715)

5717 Dioscorea Dioscoreaceae x5  
Climber or Shorea. Fts 3-lobed,  
brown purple w/ brown warts, fruit solid  
light yellow inside. (DNA)

5718 Annonaceae x1

Tree, 4 m, 5 cm dbh. Bark light grey.  
Flower very short. Showy, 10 cm long  
(not yet reflexed). 10 petals whorl  
mustard yellow, inner whorls orange

x 5719 Leaf lichens from Annonaceae (5718)

5720 Gesneriaceae x3

Epiphyte. Lvs succulent. Calyx tube sepal-like purple,  
4 cm long with long white haired undermentum, ~~and~~



Cordilla 10 cm long, anthers slightly exserted

5721 Ficus Moraceae

X 2

Climber, Lvs roughy hairy below, dentate.  
Supracaric ram. flowers orange and ripening red. Fruits often white

\* 5722 Lichens on lvs of Gesneriaceae (5720)

\* 5723 Fleshy white bracket mushrooms on rotting wood

\* 5724 Blancodes Rubiaceae X 2

Shrub, 1.5 m. Bark light gray & green. Compound infl. term., light green. Covered with black mth of spines mid-section.

5725 Mamecyclon Melastomataceae

DNA

Tree 13m, 12 cm dbh. Bark light gray, thin, smooth. Lvs light green, thick leathery. 2° vns vaguely visible, 3° vns invisible. Fls-calyx tube white. Petals white, 4, caducous. Stamens 8, anthers blue-purple

\* 5726 ~~Blancodes~~ Fleshy brown bracket fungus on rotting wood

\* 5727 White bracket on rotting wood

5728 Anacardiaceae - Spandus x8  
"PLASAU" DNA

Tree, 30m, 150cm dbh. Buttresses 4m tall  
5m out. Bark light grey, flaking in large  
patches. Lvs cld, flushing red. Frts drg  
shaped, pointed at end. Fruit wall brown, fibrous  
Min fibres difficult to get through, revealing white  
~~and~~ cotyledons. Can be eaten, raw, flavoured  
as snack food or for making porridge. ~~Leaf~~ Leaf  
rachis red. Common in river or on their banks  
sometimes a slopes but rarely so

5729 Tetracera Dilleniaceae x3  
DNA

Climber Bark light grey, smooth Fls - petals white,  
anthers yellow. Sepals fair. Frts at an accrescent  
and sepals which turn red.

5730 Artobotrys Annonaceae x3

Climber. Bark black. Fls 6cm across, sepals  
green. Outer sepals about 4 cm long, inner ones  
about 2 cm long.

5731 Rutaceae - Endee xB

Shrub, 1.5 m. ST. ERILE. Local name  
"Saluang belau". Famous as strengthening tonic,  
aphrodisiac. (DNA)

5732 Vitaceae Lea Aubre x1

Shrub, 1 m tall. Frts light green. Leaves  
above green, white below dark nitrid.

5733 Zingiberaceae x2

Herb, 1 m tall. Lvs gm above & blue. Infl red,  
w/ ~~strong~~ stem 25 cm long.



5734 Heliconiaceae x1

Monocot. Woody below w/ gray bark.

2 m tall - wood taken as well. Infl 50 cm long.  
Fr 2.5 m across, sub-globose, ~~dark~~  
avocado gm. Seed white, ~~beige~~ yellow flesh.  
yellow takes up 1/3 of fruit. Frts eccentric on  
pedicel. (DNA)

5735 Gesneriaceae X4  
Herb, 50 cm tall. Frts light brown like  
y of dachyrrhizone

5736 Rubiaceae Lasiacanthus X5 (DNA)  
Shrub, 2m. Lvs dark above. Frt semi-translucent  
white, rimiflorous. Older branches, leaves at  
the top half, but fixed along the bottom  $\frac{2}{3}$ .

5737 Rubiaceae Lasiacanthus X1  
Shrub, 70 cm high. Lvs hairy above and below.  
Frts in dense blue purple, white skin. Calyx lobes  
persistent above

5738 Artibeus Euphorbiaceae X3  
Tree, 4m. Bark light gray, smooth. Frt spinose  
red, 5 mm diam. (DNA)

5739 Gym (DNA) Myristicaceae X8  
Tree, 15m, 35 cm dbh. Bark dark brown,  
vertically fissured. Wood light brown.  
Frts smooth, orange brown, 8 x 6 cm. Ail  
orange, entire. Frt 5 x 3 cm, testa green. Seed  
L x section cream white w/ light brown  
annulations. Gum part surrounding woody red sap.  
Fruit split and the 2 halves reflex in one plane to  
release seeds

\*5740 lichens off leaves of Myrsineaceae (5739)  
(Gymnacanthaceae)

\*5741 Delicate pure white and fleshy  
bracket fungi.

\*5742 Puccinia

Slender white frondose. Stalk 3 cm long, 1 cm  
thick, slender white. Cap light ochre, 4 cm across  
6 appendages "sting" in shape, looking like apex  
of ~~finger~~ moss spring body. On ground

\*5743 Fungi

On ground - 5 found. 10 cm tall stalks  
supporting brackets. These light brown ringed  
above, white below

5744 Eriogonum

x1

Shrub, 1 m. Stalk green. Infls. of yellow  
bracts. Fruit 2x1 cm, ripening red.

5745 Unknown. Camelliacae? x1

Terrestrial herb. 40 cm high. Infl. rachis  
brown. Fts red, 1 cm diam, seed one, white

~~5746~~

5746 Lagoon

X 17

Climber. Bark red brown, ~~thick~~ densely  
lenticelled. Fl. buds red-brown, anthers yellow

Tuesday Jan 31 1995

Top of cutting block. Many ridges.

300m - 0° 42' 55.2"

11 2° 50' 34.8"

5747 *Myristiceae* *Myristicaceae* <sup>(DNA)</sup> X13

Tree 20m, 40cm dbh, buttresses small at base, 50cm exp, 1m ant. Bark gray, brittle, fissured and flaking. Lvs dark green above dark gray hairy below. Frts 5 x 3 cm softly shorty hairy brown, green below. Aril bright red, split from base. Seed 1, in x-section cream w/ brown rumination. Pith exuding red sap.

\* 5748 Bark lichen from *Myristiceae*

\* 5749 Leaf lichen from *Myristiceae*

\* 5750 Moss from canopy branch of *Shorea* - spring. Moss forms dense mat in crotch of branch bifurcation

\* 5751 Moss from canopy branch of *Shorea* - spring.

\* 5752 - Moss spring on rotting log.

← SLOPE →

5753 - Apocynum Euphorbiaceae X6

Tree 4m, 5 cm dbh. Bark dark grey, vertically striate. Lvs softy hairy on nrv blw lvs, young twigs & so on. Berries light red, 1.5 x 0.75 cm. Seed one, white L x-section

5754 Leaf lickers for Apocynum (5753)

5755 ~~Dipterocarpus~~ Dipterocarpaceae X15

Tree, 30m, 120cm dbh. Bark grey-brown, strongly lenticelled. Buttresses to 2m up, 1m out. Inner bark reddish, wood red-brown. Twigs grey brown pubescent on abaxial lf surfaces. Frt wings red. Frt 10 cm long, not ridged along entire length. [Kernig] - Common

[PHOTO] Cack

5756 - Shorea Dipterocarpaceae X10

Tree, 20m, 90cm dbh. Buttresses 2m up, 1m out. Bark red-brown, longitudinally flaking, strongly lenticelled. Wood yellow-red. Lvs dark above light below. Frt 10 cm long, wings wide.

[Tanghassia whit]

[PHOTO]

[IGNORE 155 PICTURES !!!]



~~5755~~

(DNA)

5755 Dipterocarpus Dipt. Dipterocarpaceae X 57

Tree 20m, 70cm dbh. Buttresses 2m up,  
1m ant. Bark red brown, longitudinally flaking,  
strongly lenticelled. Wood yellowish.  
Twigs grey, brown pubescent on abaxial  
lf surfaces. Frt wings red. Frt 10cm long,  
violet ridged along entire length [Photo]

5756 Shorea Dipt. (DNA) X 12

Tree 20m, 45cm dbh. Bark smooth, brown, wood  
yellow. Lvs dark above, light below. Frt  
10cm long, wings wide [Photo] [Buttresses  
50cm up, 10m ant.]

cristatus?

5757 Dipterocarpus Dipt. (DNA) X 57 #14

Tree, 20m, 120cm dbh. Bark grey-brown,  
strongly lenticelled. Buttresses 70cm up,  
1m ant. Inner bark reddish, wood red  
brown. Young twigs, ~~frankia~~, buds and  
lf abaxial surface long hairy. ~~Frt~~ Not  
~~used~~ winged from tip to bottom. Vngs,  
(calyx) red-green [Photo]

\* 5758 Lichens from bark of Shorea (5756)

\* 5759 Lichens from bark of Dipterocarpus (5755)

\* 5760 Lichens from bark of Dipterocarpus (5753)

\* 5761 Bracket fungus from rotting wood

\* 5762 Yellow toadstool from rotting wood.

\* 5763 Toadstools from soil. Stalks 10 cm tall, pink. Cap 4 cm across, orange, gills below white.

5764 Medinilla Melastomataceae x3  
Climber from Dipterocarpus (5757)  
Bark light grey, fruits orange-red.

5765 Zingiberaceae x2  
Terrestrial herb. 1.5 m tall. Lvs green above and below.  
Inflorescence red.

5766 Climber on Dipterocarpus (5757) Loranthaceae  
Fls bright red, 12 cm long, bracts yellow (XANTHACEAE)

\* 5767 Reef lichen from Acacia (5766)

(lamellata?)

5768 Dipterocarpus Dipt DNA x 3.

Tree, 20m, 65cm dbh. Bark light & ash grey  
flaking & longitudinal plates, 20x10cm

Leaves leathery, smooth, light green below. Bud  
of thin green-grey tomentum. Not upper edges.  
Strongly lamellated? (Photo)

Flowers in clusters

5769 Unknown Viciae? LNA x 10

Tree, 15m, 25cm dia. Bark grey brown, rough  
fibreous & at bark ends fibrous, 4' ms.

Leaves like. Fruits leg-hairy. Seeds 1

[1st 1 cm diam of ent hair, w/ hairs 4 cm]

[Triglochin red-brown]

#5770 leafy lichen from 5769

5771 Shorea Dipt MK X10  
Tree 25m, 40 cm dbh. Bark dark DNA  
chocolate brown, smooth. Lvs dk gm  
abov, yellow-gm below. Nut red at base, rest  
of nut and wings yellow. Wood yellow  
[Leaf lichen almost absent...]

X 5772 Bark lichen from Shorea  
Bottom of slope NEOTHEMEROPOLITE

5773 Sapotaceae DNA X1  
Tree, 5m - 5m tall. Bark red-brown. Lvs  
dk gm above brown pubescent below. Frs  
4 x 2 cm on 4 cm pedicels. Persistent calyx  
brown. All ~~parts~~ ~~leaves~~ and parts exuding white  
sap.

X 5774 Lf lichen from Sapotaceae (5773)

X 5775 Mosses growing on pole of  
Syzygium (7 cm dbh) Mosses, ground  
from pole. In a broadest fungus

5776 Annonaceae DNA X1  
Tree, 8m, 15 cm dbh. Bark light grey, thin  
smooth. Twig bark dark brown, black  
Fls 3 cm diam, gm w/ white flesh seeds.

X5 777 Lichened lvs from 5776

\* 5778 Thin brown bracket lvs  
from rotting standing bole. Bracket about  
10 x 10 cm, surrounded by small flies.  
Bocchet of a thin rubbery mycelium, 3m  
tall and +. 60 cm wide. Yellow brown  
and white at edges

5779 Melastomataceae (DNA) X1  
Terrestrial herb. 30 cm tall. Lvs dark gm  
abv, light gm below. Fts ripening from purple  
to yellow-gm.

(MARSTINAREABEIN 2005)

X5780 Moss growing on bark of small tree

\* 5781 Two spots of toxicologic growing  
together. Smaller one light brown, stalks 5 cm,  
caps rounded, 1 cm across. Larger ones up to 12 cm  
stalks red-brown, caps white, 5 cm diam, flat  
from ground.

5782 Unknown

(DNA) → <sup>Prenanthes</sup> X2

Shrub, 10 m tall. Bark red-brown.  
Lvs leathery, light gm below. Fts green  
on persistent yellow calyx. Fts green.

subglobose, del. grey flecked, 6 cm diam.  
Fits 2 seeded watery, white

5783 Liliaceae x 2  
Lower part of stem woody, light brown  
Fits 2 cm diam, subglobose, gm, 1 seeded.

5784 ~~Zingiberaceae~~ Marantaceae? x 4  
Herb, 20 cm tall yg lvs, purple  
below, otherwise gm fls white, 10 cm long  
Kefted lobes, 5 cm across, slightly yellow  
at base of spray of lower bellum.

5785 Begonia Begoniaceae x 3 (DNA)  
Shrub, 1.5 m tall. Woody below, both  
brown and green. Lvs light green blw, lvs  
rather old, and light gm.

5786 Krene Myristicaceae x 8 (DNA)  
Tree 12 m, 15 dbh. Bark brown, brittle  
lvs branching red sap. Lvs light gm  
glaucous blw. Fruit 8x4 cm, ripening orange  
and red. Oil red, entire. Small ribbed  
fragrant seed 1, in X-section white w/  
brown mottling

\* 5787 Lichen on lvs of Krene (5786)

5788 Hircowitz spring, Carving  
rotten log in stream in steep gully.

5789 Morres spring in  
rotting log on slope



Beckie Stream



5790 Euphorbiaceae Rona X3 (DNA)  
Tree, 3m. Bark thin, light gray, smooth.  
Fls globose, 3 angled, bright orange yellow.  
Seeds 3, white, each with reddish testa.

5791 Globba Zingiberaceae X1  
Herb, 70cm, fls white

5792 Unknown X1  
Tree, 2m. Fls buds dark green

5793 Meliaceae Alain XB (DNA)  
Tree, 3m, 5m dbh. Bark gray.  
Flts large, fls yellow, sweet nutty  
smell.

5794 Ficus Moraceae X4  
Tree, 3m. Bark grey-green. Synca  
corky, springy, 1cm dia, yellowish  
white flowers. Fls brown.

Out part of warty red sap.

5795 Fabaceae (DNA) X5

Shrub, 4m, creeping over river, 10 cm dbh.  
Bark orange-red, rugose. Legumes  
15 x 8 cm, 1 or 2 seeded. Legume opening  
dull light green. Canes along river bank.

5796 Rubiaceae

Shrub, 70 cm tall. Bark red brown,  
creamy spreading. Bark underneath  
purple, 2-seeded X3

5797

Costus

Zingiberaceae

X1

Herb, 2m tall. Infls. terminal, red.

5798 Medinilla Melastomaceae X6

Epiphyte on large tree, 150 cm dbh.  
Foliage very light green. (DNA)

5799 Brodiaea Juncaceae cottony  
leaves



5800 ~~Syzymia~~ Myrsine X5

Tree, 8m tall, 20 cm dbh. Bark  
grey. Rd. brown. Calyx white  
greenish pink-tinged (light).  
Stamens white. Ovary greenish (over)

5801 Lasiacanthus Rubiaceae X6

Shrub, 4m. Bark green like dark  
olive, light blue. 10m gm of DNA  
Numerous seeds. Ovary greenish small  
stream

5802 Rubiaceae DNA  
Shrub 1m. Bark light grey thin; lvs  
shiny leathery. Fls. young orange-  
yellow w/ numerous tiny yellow seeds.

5803 Unknown (Rhizophoraceae?) X6

Tree, 5m, 15 cm dbh. Bark thin,  
smooth, light grey. Lvs opp. w/  
petioles, head of both ends  
Fls small, white 10 gm. DNA

5804 Unknown X6  
Small herb on rock -  
on hill of stream.

5805 Orchidaceae X3

Epiphyte on ~~legume~~ legume - same  
species as (5795)

5806 Land toadstools on rotting  
X ~~wood~~ log

~~5806~~ RIDGE TOP

~~5806~~ 5523

Pluricaceae

XB

Shrub 2m. Bark grey and purple.  
Jern 4-angled all the way down  
Fl. buds green

5807 Fungi - Toadstool X2

~~Epiphyte~~ Envelopes at bottom  
and stalk white. Stalk to 15 cm,  
1 cm diam. Cap 8 cm across brown-grey  
above, white below. On ground.

Seems stable

CAMP MND 205m

$0^{\circ} 46' 52.0'' / 112^{\circ} 51' 15.7''$

5808 Orange-brown bracket  
fungus on rotting wood

5809 White bracket fungus on rotting  
wood.

Wednesday, February 1, 1995

Camp Mud - cont 1/2 day for beginning  
of Ramadan. (Production last Jan / July)

230m. Same hab / Hay Jan 31 slope

5810 Sapindaceae

x3

Shrub, 4m. Bark light gray-brown, flaking  
lvs. light gm. Infl. rachis brown. Fl. buds  
red. Fats 3-lobed, light gray w/  
persistent red sepals. Seeds with thin  
deep red-purple flesh. DNA

5811 Annonaceae Polyalthia

190

Tree, 10m, 25cm dbh. Bark light grey,  
strongly lichen patched. Wood yellow.  
Inflorescences ~~white~~ racemiform. Bracts  
dark red, 5 x 3 cm. Seeds 1, white  
transparent flesh w/ white radiating  
rays. DNA

\*5812 Lf lichens from Polyalthia (5811)

\*5813 Bark lichen from Polyalthia (5811)

5814 Garcinia Clusiaceae X1 DNA  
Tree 4m. Bark light gray, lvs  
glossy. Fruit 10 x 4 cm, including  
3 cm long "beak". Bright orange-red.

5815 Euphorbiaceae - Baccaurea X10  
Tree, 10 m, 25 cm dbh, Bark gray, flaking  
in small pieces, rough wood pink. Brown.  
Fruit subglobose, 5 cm diam. Seeds 3,  
orange ~~red~~. Flesh ~~white~~ translucent  
white. Watery, tart to taste. Seeds  
orange testa, white w/in. Fruit are  
really good

\*5816 Lichens from leaves of  
Baccaurea (5815) - red DNA

\*5817 Lichens from bark of  
Baccaurea (5815)

5818 Rubiaceae X1  
Shrub, 1.5 m. Fls white

\*5819 Moss on rotting log.  
2 species growing and growing together

By a stream dependent

5820 Knema Myristicaceae x1  
Tree, 4m. Both bran. Leaves glaucous  
blw. Fruit 7x4 cm, slightly beaked,  
orange-brown colored. DNA

5821 Begonia Begoniaceae DNA x3  
Herb, to about 20 cm long, has dark  
gm above red leaf spines. Red below.  
Flower 4x2 cm (longitudinally oriented).  
White w/ yellow ~~marking~~ marking at entrance  
to flower. Creeping along ground.

5822 Orchidaceae x5  
Epiphytic orchid. Stem about 10 cm long,  
tender and delicate. Flower 5 mm long,  
white with 4 purple marks at opening  
to flower. Growing among dense mosses  
on small tree (5 cm dbh)

5823 Saurauia Saurauiaceae x5  
Tree, 8m, very green, has light  
gm blw. ~~leaves~~ light brown warts  
Fruit gm w/ numerous small brown seeds  
DNA

5824 Psychotria Ambricaceae x7  
Tree, 4m by stocamide. Frs glossy  
9m up ~~fr~~ Whitish longitudinal  
stripes DNA

\* 5825 Bracket fungus x1  
Brain black bracket fungus on  
rotting log. Giving a white spores  
underneath



5826 Uphornia DNA x2  
Climber. Lvs alternate, serrate  
Inflorescences on stem. Fls red  
inside white skin

\* 5827 Alseodactylus x2  
White thin and delicate strands  
on cutting branch.

\* 5828

Fleshy white bracket fungi  
with cotton like "stuff" growing  
over them, on rotting log.

5829

Annonaceae x2  
Shrub, 3m. Bark black, lvs light  
green below w/ brown midrib. FAs red,  
fleshy, globose, 1 cm diam, single  
seeded.

5830

Durio Burseraceae x2

Tree, 7m, 20 cm dbh, weeping over  
stream. Fruit californian, light brown,  
15 cm diam. fts white w/ in, seeds to  
6 x 4 cm, air thin, pink-cream, dry.  
Bark dark red, smooth. Inner bark red.  
Wood ~~dry~~ light red-brown  
Lvs golden brown below w/ brown scales  
visible to eye (DNA)

5831 Lichens on leaves of Durio (5830)

5832 Lichens on bark of Durio (5830)

5833 Myrmercaulea

X4

Common herb on rocks in stream  
Leaf clusters spread horizontally. ~~Fls~~  
Lvs gm & red. Fl. heads gm.

5834 Gernanieae (DNA) X3

~~Terrestrial~~ herb, 20 cm. fls from base, 2 cm  
long, white lvs dark gm

5835 Rubiaceae (Gardneria?) X8

Tree, 8m, 25 cm dbh. Bark dark  
brown, densely and prominently lenticelled.  
Inner bark red-brown, wood yellow-brown  
lvs light gmish, both sides matte  
Frts gmish white indurated. Calyx tube  
perianth, 1-2 cm long, frts appear  
2 loculed of numerous white seedsto  
2x1 cm. (DNA)

\* 5836 Bark lichens from  
Gardneria (5835)

\* 5837, Leaf lichens from  
Gardneria (5835)



5838 Ficus Moraceae (DNA) x6

Climber. Bark white, smooth. Fruits on  
lower part of climber, up to 3m from  
ground, 4m away from stem of tree  
(Climber 8m long). ~~Fruit~~ <sup>Fruit</sup> ~~cariciform~~ <sup>cariciform</sup>, orange  
w/ white speckles, 1cm across & 5cm  
gm peduncles. Fruits brown and red  
within. White latex for all cut parts.

~~Tip of~~ Yg branches w/ dark brown indumentum,  
petioles as well. Lvs light gm blue.

5839 Urticaceae (DNA) x6

Tree, 5m w/ stilt roots. Wood gray, brown (light),  
Leaves and yg twigs w/ long, brown-haired  
indumentum. Infls. (small) cariciform.  
Fl buds 1cm across, light gm. Fruits  
opening red.

\*5840 Brachyfungus

Brachyfungus on rotting branch. Stalk  
brown, to 3cm. Body brown edged above,  
white below. Shape spatulate (?)



~~5841 Terrestrial fern. Spore [X]~~  
~~scattered across log~~

5841 Cylochidium - Euphorbiaceae X6  
Tree, 8m. Bark light grey, smooth.  
Wood white. Lvs light gm. Pithy  
matted, 3 gm gm culms lobes  
fermented 3 seeds N/A, green.  
Fruits 1 cm across

DNA

[densely hairy  
articulated]

5842 Terrestrial fern X1  
Scattered across lava  
surface

5843 Annonaceae X2  
Shrub, 2m. Bark red brown, Lvs  
light green, Frts canaliculate,  
3x2 cm, yellow. Lvs, gm abv  
Seeds 1 pulpy, semi-transparent  
flesh w/ purple-black ramifications.

5844 Terrestrial fern X3

~~5845~~ ~~Boerhaavia~~ fungi on  
rotting log

\* 5846 ~~bracket finger on rotting log~~

\* 58

5845-5849 Different bracket  
finger on rotting log.

5850 Unknown

X1

DNA

~~Shrub~~ 1.5 m. Young branches and  
underside of leaf underneath a  
dense dark red bran indumentum.  
Fruits axillary, dark red, styles remain  
pendant. Seed 1, white.

Laos (Lao?)

5851 Unknown (Laos?) X8

Tree, 5m, weeping over river. Bark  
red brown. Lvs glaucous below.

Fibers yellow, 5mm long

DNA

5852 Artocarpus Marracana X1

Tree, 25m, 70cm dbh. Bunches 2m  
up, 4m out. Bark light grey. Fruit  
30cm across. Sample for jelly  
and fruit.

5853

grinding about 60cm  
\* fleshy ~~white~~ white semitranslucent  
fungus on living tree. Sample

\* 5854

Moss on Mammea, 3 cm dbh (small sample) x1

5855 Terrestrial fern x1

\* 5856 Black bracket fungi, reddish

\* 5857 Chestnut bracket fungi, cream-green blue

5858 Rubiaceae X2

Herb by stream. Vinescent? Check  
young shoots on tips of frts.

5859 Ardisia Myrsinaceae X5  
Tree, 4 m. Bark brown. Berries pink  
with thin white longitudinal stripes,  
1 cm across, one seed (DNA)

5860 Terrestrial fern X1

5861 Brachydactylus (Apocynaceae?) X2  
Epiphytic orchid on rotting log  
lvs green above, strongly tinged purple  
below. Inf. 15 cm long, flowers white,

red and gm.

5862 Antidesma Euphorbiaceae X5  
Shrub, 4m, ~~wrapping~~ over small creek  
Yg brgs with dense dark chocolate  
brown tomentum, lvs light gm  
bluish at ~~base~~ light red brown vms  
Inflo 20cm long, yellow (DNA)

\*5863 lf lichen from Antidesma 5862  
Small fungi

5864 Orchidaceae X2  
Terrestrial orchid, 60cm tall  
lvs gm above and blw. Inflo reddish  
red petals green, red toward base.  
Basal petals reflexed back

5865 Moringaceae? X1  
Tree, 3m, lvs leathery, bullate  
serate. Bark grey-green. Fls yellow.

5866 Melastomataceae X (DNA)  
Creeping herb on fallen log by  
stream. Red and green hairy lvs  
and buds - CHECK IT out...

5867 Unknown

x1

Herb on rock above stream. Vinyrous  
on lower leaf surface. CHECK IT out  
VIVIPAROUS

5868 Bracket fungus on rotting  
log. White and brown ringed above,  
white below.

5869 Gesneriaceae ?

x6

Shrub 1m tall but spreading, beside  
~~stream~~ stream. Yg twigs fleshy,  
lvs light gm. Fts and bracts  
light gm. Fts 1.5 x 0.5 cm  
2 located w/ numerous seeds. DNA

5870 Gesneriaceae

x2

Herb, 20 cm tall. Fls 2 cm long,  
1 cm wide, white. Fruit 4 x 0.5 mm.

5871 Unknown (Begonia?)

x2

Herb on rock by stream, 30 cm tall.  
VIVIPAROUS

One seedling seen to germinate in  
influence.

5872 Unknown X1  
Herb growing on rock in stream.  
Ca 5. Fleshy...

5873 Fern X2  
Epiphytic fern on small tree

5874 Meliosma Sabiaceae X1 (DNA)  
Tree, Fr, 15 cm dbh. Bark light  
brown. Trunk bark brown-grey.  
Warty lenticellate. Frts 5x3 cm,  
lig. gm. ~~Seed~~ ~~Seeds~~ Pyrene 3 angled  
Seeds 1/2 in white in fleshy white fleshy,  
taking up only about 50% of room  
in pyrene.

5875 Polyalthia Annonaceae X2  
Tree 4m, Bark light grey wood  
yellow brown. Frs coriaceous / coriaceous  
Frts deep red, 3x1 cm, beaked.  
~~Seed~~ Seed 1, white w/l.

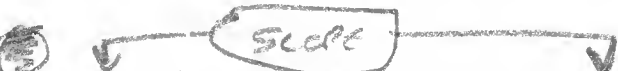
5876 Orange bracket fungus on  
rotting log

~~Thursday Feb 2, 1995~~

Friday, Feb 3, 1995

~~340m~~ 340m

0° 42' 39.6"  
112° 50' 17.7"

 5877 Labisia? Myrsinaceae X2  
Terrestrial herb, 30cm. Fts brown-red

5878 Cyperaceae X2  
Epiphytic in upper canopy branch of a large Shorea

5879 Orchidaceae X2  
Epiphytic orchid on Dipterocarpus Fts  
4 X 2 cm, gm and red.

5880 Myristica Myristicaceae X10  
DNA

Tree, to 20m 35cm dbh. Bark grey-brown,  
heavily lichen-patched fl. to about  
1cm long, sepals brown outside, cream-yellow  
within. Young twigs and leaves below  
at canopy can appear brown tannish,  
blood-colored old say from end parts





\* 5881 Bark lichen from Myristica (5880)

\* 5882 Leaf lichens from Myristica (5880).  
Lichens rare

5883 Annaceae (Adynellina?)  
Shrub 2 m. Bark brown. Fruits purple and cream white. Lvs light green.  
Jitter [Fruits 1-seeded & pithy white flesh.] DNA

5884 Bark lichen

Thallus lichen on upper canopy branch of Shorea,  
blue-green

  DNA

5885 Mesua

Tree, 20 m, 25 cm dbh. Bark orange brown  
fleshy in large patches, large patch elicits  
chocolate foam. Bark leathery, lichenized.  
Leaves slightly coriaceous, 4-venation, distinctly  
box-like below. Fruits ~~dark~~ chocolate brown,  
woody, with hardening yellow latex, and  
persistent calyx, to about 5 cm across.

\* 5886 Bark lichens from Mesua (5885)

\* 5887 Leaf lichens from Mesua (5885)

5888 ~~Cyathium~~ <sup>Araceae</sup> ~~metense~~ x1  
Climber on Morne (5885). Ffts  
yellow. outer. DNA

5889 Orchidaceae - (Pterodroma) x1  
Epiphyte on Morne (5885). Lvs  
green above. Stem and lvs below purple

5890 Ficus Moraceae DNA x1  
Climber on Shorea. V. reddish brown  
on lvs below. White latex from all cut  
parts for gum

5891 Alseodaphnaceae (Pyrene) x DNA  
Tree, 10m, 20m. Lvs both grey, brown  
Ffts green. Lvs leathery, light green below.

5892 Dipterocarpaceae (Pipt) x2  
Stable - Vacher only, tree, 25m,  
25m. Lvs on edge. Generally  
on or near ridge tops. Both ~~lvs~~ grey  
flaking on both, fringed on branches.  
Young parts covered in long stiff hairs  
red. red in dimentum

DNA

5893 *Garcinia Clusiaceae* x 10  
 Tree, 10m, ~~15~~ 20 cm dbh. Bark light  
 grey, rugose, yg rings red-brown.  
 Lvs leathery, venation invisible below.  
 Frts green to about 2 cm diam. Fls  
 yllw, seeds 2, yellow gm, watery. DNA

5894 ~~*Garcinia*~~ *Dipt-Brissonia* x 10  
 Tree, 25m, 80 cm dbh. Bark dark  
 chocolate brown flaking. Lvs light gm.  
 young lvs v. long indumentum. Calyx rings 2.  
 lgt green, 7 x 3 cm, No mv DNA

X 5895 Leaf lichen from *Garcinia* (5893)

5896 <sup>*Cratichneumon*</sup> ~~*Cratichneumon*~~ *Dipt* DNA x 10  
 Tree, ~~light brown~~ bark brown deeply  
 longitudinally fissured. Lenticles and  
 small chocolate brown indumentum.  
 If underside of golden brown indumentum.  
 Lvs dark gm abv, vms and midrib yellowish.  
 Calyx like gm of bark warts and occasional  
 white waxy, denser patches. Fls 1.5 x 1.5 cm.  
 Wings light gm, speckled, 20 x 6 cm.

\* 5897 Bark lichen of *Fraxinus*  
Cotyledon 5896

5898 Rosaceae - XD

Tree, height unknown. Frts 5-10 cm, brown w/ brown warts, seed cov, y l w.

5899 Ficus Moraceae X4  
Climber. Bark ~~red brown~~ light brown.  
~~Fruits green, lanceolate~~ Syncarpia green, lanceolate, frts brown

\* 5900 Lf lichen from Rosaceae (5898)

5901 Euphorbiaceae (DNA) X1  
Tree 5m, bark dbh. Bark light red-brown.  
Lvs dark green above, strongly glaucous blue.  
Fruit red on angles, otherwise light green, 3-lobed, one seed per lobe.

5902 Theaceae/Rutaceae (DNA) X3  
Climber, 2-3 m tall. Bark brown.  
Lvs numerous, glaucous, for a delinoid compound.  
Leaves leathery, light green, pinnate, 3-lobed.  
Oil glands visible to eye. Petioles and youngest branches red.

\*5903 Moss growing on rotting  
Stump

\*5904 Branched fungus on rotting log  
2° brackets grow off 1° brackets

5910 Syzygium Myrtaceae DNA X6  
Tree 15 m, 30 cm dbh. Bark red brown but  
appearing green w/ lichens, twig bark smooth,  
bird-scratched bark brown, wood pale  
yellow-brown. Bud 3x1.5 cm, 4 calyx lobes,  
anthers cream green in bud.

\*5911 Leaf lichens from Syzygium (5909)

\*5912 Bark lichens from Syzygium (5910)

5913 Garcinia (Clusiaceae) X6

Tree, 3 m, dbh 5 cm. Bark red-brown  
lvs thick leathery, latex canals easily  
visible. Frs to about 5x4 cm, in x-section  
single seeded w/ white latex. Calyx  
lobes reflexed.

\*5914 Heavily lichenized lvs of Garcinia  
(5913)

5915 Shorea (Dipt) Mm x ~~5~~ 10  
Tree, 25m, 25cm dbh. Buttresses  
4m tall, about 1m at base. Bark red-gray,  
slightly fissured and flaking. Lvs  
below smooth, lvs light green, mostly lichen  
free. (DNA)

x 5916 Lichens on bark of Shorea (5915)

5917 Euphorbiaceae (DNA) x 5  
Tree, 7m, 10cm dbh. Bark slightly flaking  
gray, strongly lichen patched - lvs smooth.  
Fts/dark, 3-lobed, 1.5 cm across. One  
seed per lobe. Lvs strongly lichenated

5918 Lichenated lvs of Euphorbiaceae (5917)  
~~Tree, 8m, 10cm dbh. Bark gray. Lvs~~  
~~and young twigs all stippled.~~

5919 Euphorbiaceae Mallotus (DNA) x 5  
Tree, 8m, 10cm dbh. Bark gray. Lvs and  
yg twigs shortly stiffly hairy. Fts 2-lobed,  
sally hairy-spiny.

5920 Rutaceae (DNA) x 5  
Tree, 8m, 6cm dbh. Bark brown. Lvs

glossy gm. ~~long~~ Pits gm, white at apex, glabrous,  
1 cm diam. Numerous tiny seeds inside

\*5921 Toadstool

Toadstool - fa grand. All parts cream-white.  
Stalk 6 cm cap 8 cm across. Said by local  
informant (Albayor) to be poisonous.

5922 Meliaceae (Aglaia) X10

Tree, 30 m. Bark deeply longitudinally  
fissured. Young leaves w/ decurrent  
tomentum on petioles and midribs black. Infls  
w/ same indumentum [slightly buttressed  
at base (flange-like)] 40 cm up 3 m up.  
Bark red brown, inner bark white, wood  
white yellow, 40 cm diam. [Hardly any lichen etc  
on tree. Exudate creamy white]

\*5923 Bark lichen from Meliaceae 5924

5924 Anacardiaceae (Chlorocardium?) X4

Tree, 8 m tall, 6 cm dbh. Bark brown. Lvs  
stiffly coriaceous. Fruit to 3 cm across on stalk  
(gynophore?), sitting above stem, persistent calyx  
loses all remnants of stamens. Fruit w/ 1-seed.

DNA

5925 Dipterocarpus Pipt DNA X1  
Tree, 30m, 65cm dbh. Buttresses 2m, 1m at  
Base red-bran, long, undulating flaking  
Lvs light gm, pinnation prominent. Fls  
v. few (dry season?), fls  
red tinged - me fruit lvs  
PA1  
upward

5926 Unknown DNA (Celastraceae) X16  
Tree 20m, 55cm dbh. Bark <sup>red</sup> bark, ~~decid~~  
~~decid~~ lvs. Lvs light gm, leathery. Fl. buds  
green on 4cm pedicels, stamens numerous. ~~base~~  
Base fluted 4m up. 1m up ("Apple") (Celastraceae)

5927 Krameria Myristicaceae X8  
Pdms, 12m, dbh 15cm. Bark brown. Cul  
pots of red sap. ~~Lvs and twigs hairy~~ DNA  
Twigs and lf vns and midrib black brown  
nary, rest of leaf under surface glaucous  
all glaucous brown hair

5928 Rubiaceae DNA X8  
Climber on Shorea, Fl. buds gm, open fls  
white

5929 Shorea Dipt. MP (Sapindiaceae)  
Tree, 35m, dbh 70cm, Buttresses ~~large~~  
DNA



1m up, 1m out, Bark <sup>dull</sup> red-bran, w/ large  
flakes. Damar yellow-white.  
Rvs thick leathery, folding upward,  
Glyc. wings gm and red. In dry season  
its reported to be red [PHOTO]  
(photo diff. w/ some sp.)

\* 5930 Lichened leaves from Kaena (5927)

5931 Anacardiaceae (Mangifera!) x10  
Tree, 10m, 15cm dbh. Fruit 10-20cm, light  
green. Single seeded and exuding white  
sap. Bark red-bran, strongly lichen  
marked. Lvs light gm above, dull abv.  
[Seed yellow] [Wood white] [Sap blackish]

\* 5932 Lichened lvs of Mangifera (5931)

\* 5933 Lichened bark of Mangifera (5931)

5934 Unknown DNA x1  
Climber on Shorea (5929)

\* 5935 Spacing moss on rotting log

\* 5936 Spacing moss on rotting log

\* 5937 Green Thallus Lichen on  
tree bole, 30cm dbh



blw. Frts winged, 1 cm long, info. terminal

5943 Flacourtiaceae (Hydnora) CHECK <sup>X10</sup>

Tree, 20m, 30 cm dbh. Bark brown,  
strongly like patchouli. Inner bark yellow-  
brown, wood yellow-brown. Lvs thick,  
leathery dark abv, light blue and  
glaucous below, 1.5 cm diam.  
~~Calyx~~ sepals 3, persistent.  
2 Style 5 cm for fruit frts 2 seeded,  
or 1 or 1 aborting DNA

\*5944 lichen on bark of 5943

\*5945 lichen on lvs of 5943

Saturday Feb 4, 1995 245m  
Lissing it down, NA yesterday's site  
250m

② — SLC of E — ②  
5946 Malvaceae DNA x5  
Climber on Shorea. Fl. buds light green  
Y<sub>3</sub> leaves flatt brown. Bark brown-green,  
square-fissured

5947 Gualtheria Eucalyptus DNA x2  
Climber on Shorea. Bark red-brown, mpae.  
Lvs stiffly leathery, fls greenish, orange at

5948 Loranthaceae DNA x1  
~~Plants on~~ Shorea Pearcei (?) on Shorea  
Stems green-brown. Lvs light green, leathery  
Fl buds white

\*5949 Fungus  
Bracketed fungus on rotting wood. Stalks  
1 cm, orange-black above, grey below

\* 5950 Fungus  
Terrestrial toadstool. Stem 1 cm thick, black,  
hard. Cap 12 cm across, black above,  
gray blue.

5951 Fabaceae ~~RNA~~ x4  
Tree, 6m, 7m dbh, bark smooth, light  
buff-brown. Lvs light below fls  
1 cm long. Calyx bright scarlet red,  
corolla purple

\* 5952 Moss on ~~Small tree~~  
young sapling branch

\* 5953 Moss on ~~Small tree~~  
(Small sample) young sapling branch

\* 5954 Boletus fungus on rotting  
log. cream. orange sp., white blue

By 5 Sept 1961

5955 Meliosma

Tree, 7m, 15 cm dbh, bark light gray,  
weeping over nodes. Fls light green,  
subglobose, 4 cm across. Yellish with  
heart flesh around green coat. Seed with  
thin fleshy epic

5956 Artisia Myrsinaceae (DNA) x8  
Shrub, 3m. Bark light brown.  
Inflorescence red fruit 1 cm across dark  
gm, style remnant apical. In section are  
dark green seeds.

5957 Sarcocolla UNIDENTIFIED (DNA) x1  
Shrub, 3m. Bark green and brown below fruit  
green or 2 cm pedicel and 5 pointed  
green calyx lobes. Fruit splitting into 3  
numerous small brown seeds.

5958 Xitaceae (DNA) x1  
Climber has brown below. Fruit  
elliptic, 3 cm, bright red and gm.

\* 5959 Fungus  
Creeping brown fungus, some of  
white margins, on living log.

\* 5960 Toadstool  
White toadstool on living log

5961 Fern  
Epiphytic on ~~the~~ fallen branch from large  
tree

5962 Fern  
Terrestrial fern

x1

5963 Acanthaceae (DNA) x2  
Terrestrial herb, 50 cm long. Stem  
dark green. Fls green, 3 cm long. (1)  
one cream seed. Fls cream

5964 Ficus Mammee (DNA) x6  
Climber a small tree. Bark grey brown. Epiphytic  
caniferous, 5-10 cm diameter, opening  
orange w/ white dots making it rough to  
touch, fls brown w/ white. White latex from  
cut palm.

5965 Melastomataceae x1  
Epiphyte a small tree. Bark light  
grey. Lvs thickly leathery. Fls  
2 cm diam. calyx tube white,  
lobes transparent white (4),  
stamens 8, purple.

\* 5966 lichen a leaver of  
Melastomataceae (5965)

\* 5967 moss springy on small tree

5968 Epiphytic fern X1

5969 Epiphytic fern on largetree X3

~~Stachys~~ Dipterocarpus

5970 Vaccinium Ericaceae (310) X1

Shrub, 1.5 m. Lvs ~~Stachys~~ 1170 m alt.  
lvs leathery, arcuate, light gm blue,  
fleshy gm. Dipterocarpus

\*5971 Moss of upper canopy band  
of large ~~Stachys~~ (170 m alt.)  
Dipterocarpus

5972 Euphorbia DNA X4

Shrub, 1.5 m. Bark brown-green. Fk

lvs are of persistent green sapals.

~~Seed~~ 6 of three bundles, each of  
white seed.

\*5973 Moss on upper canopy band  
of ~~Stachys~~ Dipterocarpus

5974 Orchidaceae X3

Epiphytic orchid. Buds black, entrance

orange

5975 Nepenthes X1

Epiphytic. See lvs read below. Tray 5 x 2  
cm.



\* 5976 Blue green Thallus 1, then  
on upper canopy branch of ~~Shorea~~, ~~in~~

Diplazium

SCOPE

5977 Melastomataceae x3

Herb, 20 cm tall. Lvs light green.

Fls white in 3's

↳ becoming pink

5978 Rubiaceae x1

Shrub, 2 m. ~~Fls~~ Bark brown

Fruit purple, some seem accrescent. Seeds B,  
white

\* 5979 Bracket fungus on rotting log.  
~~fls~~ fleshy transparent white  
with pink-purple layer above

5980 Medicinilla Melastomataceae x1

Scrambler, 3 m Bark light brown.

Fls in pairs to 4's, campanulate. Calyx  
inverted, corolla purple. Lvs thick  
leathery, light green.

5981 Pleinanthus Vitaceae x1

Inflo only found. Umbel. Radicle bright  
red-yellow dots. Fls 3 cm long

5982 Cyperaceae x1  
Terrestrial herb, ~~1.5~~ 1m tall.

5983 Flacourtiaceae x2

Flacourtia rukam

Tree, 4m. Fl. med. Bark grey. Fr. Bright  
scarlet 5 x 2 cm, single seed. ~~fruit~~  
→ white w/ brown taste in center.  
cream yellow flesh

5984 Mass spawning on rotting wood

5985 Melastomataceae x3  
Terrestrial herb, 20cm. Infl. reddish  
red, fls white.

5986 Rubiaceae (DNA) x4  
Terrestrial herb, 50cm tall. Stems and  
lvs light gm, fls white

5987 Drypetes Euphorbiaceae x1

Tree, 6m. 3cm dbh. Bark dk brown, yg  
fringe light gray → brown. Fruit

4 x 3 cm, dk gm, beaked

Associated with Shorea - yellow

mid-section. Fruit cross-section w/ numerous  
white gum-like seeds. 1.5cm diam, and  
surrounding watery white latex.

5988 Mimocydon Melastomataceae X10  
Tree 12m, 15 cm dbh. Bark light grey,  
bark thin. Frts 3 cm diam, dull dark  
brown. Seed 1, yellowish yellow testa,  
leaky, 1 cm across imbedded in green flesh. (DNA)

5989 Hoya Asclepiadaceae X4  
Epiphyte of Mimocydon (5988). Lvs.  
succulent, ~~glaucous~~ glaucous lvs. Fls white. (DNA)

5990 (Ptilospermum ?) Maraceae X2  
Climber on Mimocydon (5988). Stem and  
petioles dark brown red. Fls. in pairs of  
perianth bracts below, fls light purple. (DNA)

5991 Lichen from leaves of Ptilospermum  
(5990)

5992 Shorea Dipterocarpaceae (DNA) X10  
Tree, ~~15m tall~~ 15m tall, 25 cm  
dbh. Bark light brown heavily  
lichen branched. Lvs. dark thick  
leathery, light green lvs. Calyx  
in ays green for the bottom quarter, red  
top. [Tenkawang buluh]

LAST ONE WAS TENKAWANG TELUK  
C, CHERAK

5993 Lichenized bark of Shorea (5992)

5994 Lichenized lvs of Shorea (5992)

~~5995 Urdnam (Boraginaceae) XR~~  
~~Terrestrial herb 10 cm tall~~  
~~Brown~~

5995 Urdnam (Boraginaceae) X2  
Shrub to 1m tall. Light brown scales, dark  
green above. ~~Calyx lobes~~ Sepals  
5, white. Pet. brown, ridged

5996 Liliaceae (DNA) X3  
Terrestrial herb. Brts. reddish yellow-orange  
2 x 1 cm, eccentric on peduncle. Seedl,  
white

5997 Psychotrie Rubiaceae (DNA) X9

Tree, 4m. Lvs. dark dr. very light green  
blw. Flts 2 x 1 cm, light green of green  
stigma. Seeds white, 2. Frs. "crispy"

\*5998 Lichenized lvs of Psychotrie (5997)

\*5999 Lichenized bark of Psychotrie (5997)

6000 Dysoxylum Meliaceae x1 (7A)

Tree, 8m, 10 cm dbh. Bark gray-brown  
Frt 7x5 cm, fleshy green, or 5 cm peduncle.  
~~Section~~ In x-section up 3 seeds, one  
developing, 2 aborting, white flesh  
light brown, lichened.

6001 Lichen on lflets of Dysoxylum

6002 Dysoxylum Meliaceae x1 (DNA)  
Shrub, 2 m Bark red-brown, buds reddish

x6003 Toadstools

Yellow orange toadstools on ground. Stalks  
to 15 cm x 1 cm, caps 7 cm across

x6004 Lichened lflets of Dysoxylum  
(6002), 5909. [CHT 69-73]

RIDGE

6004

Rubiacaceae

(DNA)

x1A

Tree, 3 m. Bark light gray, thin  
fleshy frt light green. Frt  
slightly lobed, 1 cm diam, 2 pale white  
seeds

6005 Artisia Myrsinaceae (DNA)

Tree, 7m, 10m dbh. ~~lance~~ branched  
pagoda like at apex. Yg twigs  
and yg. leaves ll. brown, red  
underside. Frts 1 cm diam. brown-red.  
Seed are, white

6006 Leaf lichen from Artisia (6005)

6007 Bark lichen from Artisia (6005)

6008 Artibeus Annonaceae X3

~~Climber~~ Bark black. Fruit brown-yellow,  
5 cm across

6009 Artibeus Euphorbiaceae X4

Tree 4m, bark light gray, lvs light  
gray, brown below. Frt 1 gm, 0.75 cm,  
ovoid, 1 cm long (DNA)

Sunday, Feb 5 1995

Camp Mud

\* 6010 Toadstools

Gray toadstools growing on wood. Stalks white, to 8 cm long. Caps to 3 cm across

\* 6011 Toadstools

Terrestrial toadstools. Stalks white, to 12 cm long. Caps gray-brown, to 8 cm across

\* 6012 Toadstools

Toadstools on rotting wood. Stalks dark orange-brown, to 10 cm long. Caps thick, light orange-brown, to about 7 cm across

\* 6013 Fluorescent toadstools

White toadstools from rotting wood. Semi-translucent and fluorescent at night (jamu malam)

\* 6014 Orange gray bracket  
fungi on rotting wood

\* 6015 Yellow orange fungi  
on rotting wood

6016 Asteraceae x5  
Terrestrial herb, to 50 cm. Can  
get to 1 m fls white. Lvs gray and  
very sticky

② ✓ CUTTING BLOCK RIDGE ②

340 m

↙ 0 42 50.2  
112 50 08.0

6017 [Photo] Shorea Dipt. M. x10  
Tree, 30 m, 95 cm dbh. Bark dark  
gray, deeply fissured. Buttresses thin  
4 m up, 2 m at. Lvs dark green  
calyx ring red. Lf lichen glaucous (D  
N A)  
(Mahabangay - Kahangan)

6018 Zingiberaceae x2

~~Epiphyte~~ on Shorea (6017) lvs red.

↳ Near main + CREE STRIAL?



6019 Epiphytic fern on Shorea (6017/X4)  
Spring shoot on lvs INA

6020 [LENTANA] [Photo] Mn x 2  
Tree, 30m, 70m dbh, Bark red-  
brown, bark longitudinally fissured  
Buttresses 4m up 2m and  
[SBK - Africa II] STERILE

6021 Epiphytic fern

Score

x1

Score

6022 Shorea Mn [Photo] [BUNYIT]  
SMALL FRTS AND FALLEN LEAF  
Tree, 35m, 130cm dbh. Bark dark  
brown, vertically fissured. Fts red,  
calyx wings about 4cm long.

6023 - CHECK IT out Liliaceae X 8

[Sketching] [Photo]

Sagittate? found by buttress of Shorea  
(6022). Plants 10cm tall, short roots  
stems light orange, fl. transparent "bell",  
2cm tall of 5 processes 7cm long

Offshoot 1m

Translucent bit orange. When it came off, 3  
processes visible below.

About 8 in this grove about 1m<sup>2</sup>

[Corolla falls away - connate

6024 Theaceae DNA X1  
Tree, 5 m. Bark dark brown. Fl  
6 x 4 cm, gm w/ brown veins, 5 calyx  
lobes. Seed pale yellow w/ brown testa.  
2 white flesh.

6025 Aporosa Euphorbiaceae DNA X1  
Tree, 5 m, 7 cm dbh. Bark light  
brown, smooth. Fl bright orange, 4 x 2 cm.  
Seed white, within purple testa 2 locules  
obovate. [Moto]

6026 Garcinia Clusiaceae DNA X4  
Tree, 5 m, 7 cm dbh, stilt rooted. Bark  
dark red-brown, wood yellow. Lat pale  
w/ cream colored latex. Lvs dark  
abv, light below. Fls gm, 3 cm diam,  
calyx lobes reflexed

x6027 Leaf lichens from Garcinia (6024)

6028 Unknown 2000 X5  
Climber on Shorea. Bark gray, fissured  
vertically. Medulla blue w/ yg lines  
w/ rust-red mottling. Fl. buds  
green, 4-5 lobes, 2 locules

6029 Shorea Dipt MK x10 DNA  
Tree, 25m, 65cm dbh. Bark red-  
brown, deeply vertically fissured. Buttresses  
70cm up, 2m out. Fts - calyx yellow  
[Photo] \* COLLECTED \*  
~~6030~~ [Wood yellow]

6030 Shorea Dipt MM x10  
Tree, 25m, 65cm dbh. Bark grey on  
outer scales, red on flaking. Wood  
cream. Buttresses 2m up, 3m  
out. Lvs v glaucous below. Calyx rings  
yellow DNA

\* 6031 Brachy furus x1  
Large bracket fungus, 60cm across on  
rotting log. Pale brown atk, light blue,  
surrounded by small flies

6032 Adusia Myrsinaceae x1  
Shrub, 50cm tall. Lvs leathery, light  
green blue, venation barely visible, 30ms  
invisible. Berries gm of red flesh. Single  
seed light green

6033 Pinanga Araceae XI  
Herb, 60 cm tall. FAs 2 cm long, gm-white,  
single seeded.

② ✓ CAMP MID ②

6034 Pometia pinnata - Sapindaceae ② 7

DNA

Tree, 15 m, 40 cm dbh. Bark gray, flaking  
thinly, wood yellow. Young branches and  
inflo shoots of light brown indumentum.  
Fls small. FAs to 5 x 3 cm green,  
mature orange red to <sup>purple</sup> black. Pet white,  
very early. Seed oil. Green

6035 Prokaceae DNA x8

Tree, 15 m, 30 cm dbh. Bark grey. Fls  
orange-yellow 1.5 cm long. FAs ripening  
black, 1 cm long, red skin. By river

6036 Chisochortus Malvaceae DNA

Tree, 8 m, 15 cm dbh. Bark light grey,  
wood yellow. Lvs dark green, gm above,  
light blue below. FAs to 6 cm across, slightly  
buff brown, fuzzy to touch. Seed  
hard, dark brown testa

↑  
Leaving rd - on shore  
4.5 Km from Camp Mid

Camp up FABACEAE

6037 ~~Leguminosae~~ (DNA) X2

Climber. Fls to 12x6 cm, brown  
w/ dark brown veins. Seed 1 in 1 or 2,  
~~seeds~~ light green in white flesh

6038 Rubiaceae (DNA) X2

Climber. Lvs below and in fls large branches  
w/ glaucous underneath. Fl. buds green - a Koopassie

6039 Vitaceae (DNA) (Koopassie) X4

Climber on ~~Acacia~~ (6034) Lvs glossy  
fls red, 1 cm long. Sides, white. Fls ripen  
cherry-black

6040 Orchidaceae X4

Epiphyte on ~~Acacia~~ (6034). Fls  
very orange, 1.5 cm long, Koopassie

6041 Unknown. Dioscoreaceae X3

Climber. Fls on stem, white, ripening black

6042 Mimosaceae - Euphorbiaceae X2

Small tree with TC. Crushed beneath

Jelled Shorea. Lvs glaucous blw

6043 Cannaraceae? X3

Climber on Dioscoreaceae, Lvs leathery,  
light green, fruit 4x2 cm, red, red.

CRUISE STAG MAP - "SEE IN 4 STARS"  
ABC

Get new "Chieftain" album  
↳ The Long Brown Band Dark Veil  
'See Shredded' [RCA]  
Recommended

Feb 8 1995

Exp to BR from Camp Ranjung

Camp Ranjung - 210m

0° 50' 45.6"

112° 52' 47.8"

Dohoi

6044 Bocconia argulata [Umbing] x 8

Tree, 12m, 30 cm dbh. Bark thin, light grey  
fls red, 8x3 cm. Seeds inside white, del. can!  
fron forest, planted in this today. Lvs & terminal  
pseudostem, grn, 30 var available. Info Paul re: flower

6045 Durio

[Laken] Bhs Dohoi

x 4

Tree, 10m, 40 cm dbh. Bark orange, red-brown.  
fls at base. Flr + 25 cm long 1.5 cm wide,  
oil yellow, dry, flr + yellow. Flr skin yellow  
Hatched in Odang

6046

~~0° 47' 51.1" / 112° 50' 02.7"~~

Fluc ← 0° 46' 26.9" / 112° 49' 04.6" 1 2 3 5

Rafflesia On island in middle of river -

Camp! One bud found, 35 cm across.

Seeds orange-red, bracts dark red-brown.

[Kuncang - Mt Darum]

Sun Feb 12 1995  
~~boat~~

Camp 3. 0° 42' 56.6"  
112° 46' 46.5"

[Large pressure fluctuations - 330-550m]

~~#8~~ → BR RIVER → ~~#8~~

6047 Holciopsis? Pruuna? x2

Shrub, 3 m. Bark dark red-brown. Fvs strongly abscised. Fts cauliform & a  
g of 5, 1 x 4 cm, bright yellow-orange.  
Seed air, large, white, fvt wall 7mm thick.  
[~~Elisanakolap~~] - said to be common fvt can  
be eaten, but not seed [Banyan

~~6048~~

[Baccaurea leed Tunding unday - fts  
edible - used as veg. - ~~also~~ eaten too.  
[Aporosa - Pitung]

6048 1 x ore

Shrub, 50 cm tall. Fvt dull green-yellow,  
1 cm long. x2

6049 Miura Tilione x1

[Pohnanybung]

Tree, 5 m, 10 cm dbh. Bark dark brown



[Bright Uboh metum - large <sup>Hand</sup> 77 g. 51 g.]  
Lvs and gg. (high) dense induratum.  
Frt's dog shaped, 2-2 cm, bright orange

6050 Artocarpus anisophyllus Moraceae X4

[~~K...~~] Tree, 25m, 40cm dbh,  
fluted at base. Bch. dark brown-grey  
vertically rowing and shallowly fissured.  
Cut both, ending sap. Frts 30cm. diam.  
yellow frs cpl. [Seedling of sap  
and cpl. 1:1] [Fr. water - 5:1 - in wood]  
bark used for rope for boat making (Lvs &  
seedlings very a lot) (Poon)

6051 Saurauia Saurauia X6

[Butu agu (dog-hair)] Shrub,  
2m, ~~frs~~ Fls bright red outside, white  
inside

6052 Acmena Myrtales X5

[Uboh] - used for household implements  
Shrub, 1.5m. Bkth. purple ex. like  
celoge tree.

6053 Canavalia (C. ... ) X1

[Pongala - large Pongala up - for  
water for drinking, then cut]. Climber, frt  
10x5 cm, orange yellow color.

~~6054 *Crypt*~~

~~E~~

6054 ~~*Cryptanthus*~~ *Melastomataceae* X4

[Lochte Karamut] Shrub, 3m tall.

Fts gm, globose, 3 cm diam. Caly (lobes) - - -  
folded like a cabbage leaf.

6055 *Pinanga*

X1

Shrubby, 2m tall, flexuous. Stem dark brown. Seeds of subglobose, 2 cm diam, gm blw, white abv.

6056 *Euphorbiaceae* *Drypetes* X1

Shrub, 75 cm tall. Lvs glaucous, dark abv, light abv. Frt dark gm, 1 cm across

6057 *Calophyllum* *Clusiaceae*

X10

[Metax - household stuff]

Tree, 6m, 10 cm dbh. Bole dark red-brown, smooth. Fls dull mustard-ylw, sub-globose, 2 cm dia. Seed cre cream-ylw in a light brown testa, frt 1/2 thin beak.  
[Locals recognize 2 types]

6058 ~~Sapindaceae~~ Meliaceae 13  
Shrub 1.5m. Fls yellow-orange, 6 cm  
across, 3 seeded, seeds ~~dark~~ dark brown  
w/ fleshy oil, slightly sweet, edible.  
Lvs w/ large clashing stripes. Flts light  
green. Fls light cream-yellow.

6059 Gesneriaceae X 3  
~~Herb~~ Herb, 20 cm tall. Fls cream-white.  
Ergency by ephemeral cecid

6060 Annonaceae X 4  
[Mahoe - best wood for firewood]  
Tree, 6m, 8cm dbh. Bark smooth, dark  
brown-black. Flts ripening soft, light  
orange w/ white flecks, 4 cm diam.  
glabrous. Seed small 1 cm diam. Carved  
w/ transparent orange, turning large, w/ yel  
fst, 5 cm wide,

6061 Ardisia Myrsinaceae X 8  
Tree 4m, 10cm dbh. Bark light  
grey, smooth. Lvs distinct, Fls deep  
coral, sepals 5, pubescent fls reflexed.

6062 *Araceae*

x1

Arborescent, 5 m, 10 cm dbh. In flo. 2/3's way up stem, rachis red, frs green turning white. Fronds to 2 m long.

6063

*Rubiaceae*

(*Maras sardlem*)

x3

Shrub, 75 cm tall. Fruits ripening dullish purplish from white.

6064 *Annonaceae* (*Marchai toing mander*)

x48

Shrub, 3 m. Bark black, smooth. Frs 1 cm long deep red.

6065 Unknown

x1

Shrub 3 m, bark grey. Frs cream-yellow, 6 x 6 cm  
Seed 1

6066 *Euphorbiaceae*

x5

Shrub, 2 m. Bark light grey, lvs very light green below. Fruits ~~very~~ red, 2 cm across, splitting to expose black seeds. Frs 3 lobed.

6067 *Melastomaceae* (*Dysachylen*)

x1

Tree, 3 m. Bark dark brown. Black, frs, 6 x 3 cm. ~~in flower~~, 1.5 cm deep, green ripening red. Seeds 2, green in x-section.

6068 Annonaceae

x1

Shrub, 0.75m. Bark dark red-brown.  
Lvs light green below and 30% unimbricate.  
Fl 1.5 cm across, still in bud (just)  
white.

6069 Annonaceae

x1

[Kaju sapuh] - bark burnt to keep bad  
spirits away. Tree, 4m, 5 cm dbh. Bark  
smooth, light gray. Wood cream-yellow.  
Lvs light green above, pale blue below. 2 fls. calyxes  
frs green, drop shaped, 5 x 2 cm

6070 Pinnanga Araceae x2

Araceae, 2m tall ~~1.5m~~ 1.5m dbh.

Frs 1 cm long, dark green above, light green  
at base.

6071 Michelia Magnoliaceae x1

[~~Bojodan~~ ~~fr. wood~~]

Tree, 5m tall, slender. Inflorescence 15 x 7 cm,  
cream-yellow, frs of brown perianth.  
Apparently uncommon. Found only  
by trees.

6072 Krema Myristicaceae x6  
Tree, 4m. Lvs light green above, glaucous below.  
Fl. buds light brown. ~~But the fruit is brown,~~  
~~smoothish~~ Bark red-brown, smoothish.

6073 Piper Piperaceae x1  
Climber on Krema (6072) (Fl. shiny light  
red, single seeded).

6074 Fern x2  
Epiphytic fern

6075 Euphorbiaceae x1  
Shrub, 2m. Inflo. terminal, 25cm long. Fruits 1cm  
long, 2cm wide, soft, white w/ 1 white seed  
(1cm x-section)

6076 Pinanga Araceae x3  
Arborescent, to 1.5m tall. Fr. globose, 1cm  
diam, white, gon at apex.

6077 Occhidaceae x4  
Epiphytic orchid. Small tree. Fl. bud  
5x2 cm, white. Fr. 8x6 cm, 6-winged  
(long, minutely) w/ remnants of flower  
stamens.

6078 Schefflera Araliaceae x 2  
Climber. All leaf and leaflet nodes swollen.  
Frts 1 x 0.5 cm, ripening red from yellow.  
[Burundi]

~~6079~~

6079 Ayalaia Meliaceae x 6  
Tree, 3 m. Bark red-brown. Yg lvs all coriaceous  
light rust-brown in anthesis. ~~Very~~ Very common  
along river banks

[Boko berako - frts edible]

6080 Unknown [Rose 'nt] x 4  
[~~Flower~~ Int 5 frts used as fishing bait]  
Climber. Bark light brown. Frts fleshy and  
pink-red, sub-globose. Seed are in white  
flesh to sting like a stinging nettle weed perfume.


6081 Grass  
Grassy in status in flood area of river

6082 Syzygium Myrtaceae x 20  
Shrub by stream in flood area. To 6 m tall,  
bark light gray/red-brown. Yg twigs  
light red-brown. Fl. buds white.

6083 Menispermaceae x4  
Scrambler by river bank. Lvs glaucous blue  
fls purple. [THIS IS THE ONE GROWING  
BY ~~RIVER~~ OF LOUGHNA RD. IS THIS  
WHERE THOSE CLIMBERS/SCRAMBLERS  
ORIGINATE? ]

6084 Syzygium Myrtaceae x4  
Tree, weeping over river, 10m long, 35cm  
dbh, stilt-rooted. Bark white-grey. Fls  
w/ numerous white stamens fls light  
green, subglobose 5x3cm. Seeds 2, testa brown.

\* Biocory. Seeds 2 min frt. 1/2 space taken  
up by air. Testa adheres to coty. Seed  
germinate in frt - carried down stream,  
floating - then break already advanced?

 coty. joined by tissue in middle.  
[Jambu PACAN? - no ms]

6085 Schizaceae? (Meliosma?) x  
[Koromona - no ms]. Tree, weeping  
over river, 8m long bark brown. Kz cream  
frt yellow orange. Seed 3 angled, white  
in cross section, hypsere wall brown, 1



Shik flesh [young] wings strongly  
inrolled.

6086 Orchidaceae

Epiphytic orchid. Fls mustard yellow <sup>x1</sup>

~~At least 17 red stripes~~

6087 Orchidaceae

Epiphytic orchid. Fls to winged <sup>x1</sup>

~~6087~~

From Camp 2 - Refer to G.P. Reference

6088 Convolvulaceae

Herb - beside river

x2

6089 Nepenthes [Tropical]

+2

Epiphytic on tree overhanging river

6090 Orchidaceae

Epiphytic on tree overhanging river. Fls yellow <sup>x1</sup>

6091 Orchidaceae

x1

Epiphytic on tree overhanging river

Baru from Tumana. DANCE TO TUMANA DASA

6092 Nephelium lappaceum - Sapindaceae X 8  
(Lankutan). Tree 15m, 40 cm dbh,  
buttresses 1-5m up, 1m wide. Bark brown-  
black. FRTs 6x3 cm, ripening yellow-orange  
w/ red hair. Flesh relatively thin w/ large  
see (compared to another). Under attachment  
to 200 5m, away from base

6093 Baccaea Euphorbiaceae X 6  
400m slope into small clear river. Tree, 25,  
25 cm dbh. Bark light red. <sup>ingose</sup>chocolate/inner  
bark red, wood yellow. FRTs mustard yellow, 7cm diam.  
3-lobed, (1/2) seeds per locule. Outer wall 7mm thick,  
inner 5mm thick. Seeds white in x-section, yellow-flesh.  
Flesh tasty, <sup>like</sup> between banana and pineapple  
flavor. Locals say it can make you small if the fruit if  
you eat too much. Lvs dark above, light below. Red <sup>chor</sup> hairs  
(like Aglaia) on dark and more <sup>thin</sup> visible in fls.  
~~6094~~ Strombosia calycina, to 15cm long, stout. [Many ch  
branch]

6094 Shorea LEAF FRUIT can. By river.  
25m 50cm dbh, bark brown, smooth, horizontal  
FRs red. Terrestrial. [Tabary branch]

6095 Dipterocarpaceae - LEAF/Fruit & cal. [KINER]  
Tree, 20m tall, 45 cm dbh, widely fluted  
at base, gray-brown, ringed, thickly pitted  
[300m]. Found only near river banks, Common

6096 Fungi

Found on rotting stumps. 3x2 cm. Grass roots  
w/ stiff hairs. When matured it becomes roundish,  
w/ a white head. W/ 4-6 white fls and  
"seeds" 5mm diam. These are released explosively.  
~~After~~ this the fungus is identical w/ a few  
gray seeds. Not

6097 Garcinia Chinensis

[Achiang] 400m on slope. Tree, 20m, 25cm  
dbh, bark chocolate red, slightly flaking, fruits  
scarlet red. 7 cm across. Seed covered in  
delicious white flesh

LEAF / FRUIT & cal

6098 Orchidaceae

x1

[350m] Saprophytic orchid ~~on~~ in soil  
by rotting log. Flower stem white

15 Feb 1995

6099 Balanophoraceae

x lat

Mustard orange flowers - saprophyte -  
growing on side of slope to summit of  
Bukit Raya. 1450 m

6100 Lichen on twig - blue green

16 Feb - Summit of Bukit Raya Dam

Check in report behind

16 Feb 1995

MOSS FOREST

6101 Fern B. RAJA SHAMUT x 1

Growing in mossy moss clump

0° 39' 35.8"

6102 Fern 112° 41' 20.7" 2310 m  
7580'

Growing in moss clump

6103 Vaccinium Ericaceae

x 8

Shrub, 2 m tall at top of large moss clump.  
1.5 m tall. Bark red-brown. Lvs leathery,  
light green, midrib red at base of lvs.  
~~lightening up stem~~ turning grey towards  
apex. Fls 1.5 x 1 cm, white; anthers yellow.

6104 Vaccinium Ericaceae

x 8

Shrub  
Fls, 2 m tall at top of large moss clump.  
Bark grey on older branches, red-orange in  
younger ones. Lvs light green, yellow  
Fls 1.5 x 1 cm Calyx red. Corolla

greenish below, strongly red-purple tinged  
- upper half. Rather orange.

[ Leaves similar to 6107, but a different leaf  
and fl shape? ]

X Brown Style exserted from unopened bud  
But then opens to reveal stamens. Interestingly?

6105 Lichen - Blue green thallus -  
Common on summit - top. Growing on  
Vaccinium

6106 Lichen - Candelabra - Growing, stick  
like, to 3 cm, then bifurcating to  
another 5 mm. Color bright green - no green  
growing on mossy soil

6107 - Moss on ~~summit~~ grand  
springs parts covered in water.

6108 Vaccinium Ericaceae X 8  
~~Stems~~ 2 m shrub, 2 m or more clump.  
Lvs brittle-leathery, light grn, both  
smooth, red brown, frs white,  
1 x 1.5 cm, 4 red seeds (tiny), Style

persistent, erect, 1.5 cm

6109 Vaccinium Ericaceae

Shrub, 2-3m. Bark rugose, red brown  
Fls. ~~both show abscission~~, 3 x 1 cm, tapering  
to base, light red. Anther brown on  
yellowish filaments. Fruit green w/  
large, vertical orange stripes. To 3mm  
across. VIVIPAROUS

6110 Lichen

Growing in circular patches on large and  
seemingly old rock. Patches are dark grey, 8 cm  
diam.

6111 Lichen

Green leafy lichen growing on tree and  
moss clumps

6112 Nepenthes

x2

Common epiphytic moss forest on summit and  
~~near~~ below summit of B. Daya. Pitcher to  
15 x 10 cm. "lid" about 12 x 12 cm - rel. large.

used to make tea

6113 Phyllocladus [Aphoi] x4

Shrub, to 1.5 m tall. Bark grey-brown. Only one collecting found sprouting in fls. 4 cm long, brown. Frequent on and below summit (Strong resin smell and sticky exudate from cut parts)

6114 Nepenthes

Epiphyte on and near summit of Bukit Raya. Fls - calyx lobes green, 5 x 3 cm. Anthers dull orange or green process. Pitcher to about 15 x 5 cm but ~~deltoid~~ deltoid, 6 x 4 cm, long hairs on ridges of trap

6115 - Rhododendron Ericaceae x2

Same shrub on summit but rarely flowering. To 1.5 m, bark dark red-brown, young twigs and leaves covered w/ brown scales. Lvs thick, bullate. Flower 3 cm across. Corolla white, outside and on pedicel covered w/ brown scales. Stamens ~~20~~ anthers brown white filaments. Style covered w/ brown scales for first 3/4 of length. \* Bracts brown scaled on outer edge \*

6116 - Rhododendron Ericaceae x2

Epiphyte. Occasional on and near summit of Bukit Raya. Bark grey, longitudinally striate. Leaves leathery, dark green above, red below on yg lvs. Pedicels of red w/ yellow dots (lenticels?). Corolla

tube 7 cm long, ~~corolla~~ corolla 6 cm across  
Stamens orange, Stigma orange. Frts dark red.  
5 ridged (one per lobe), 6 x 1 cm, style  
persistent, 6 cm long.

6117 Orchidaceae X6

~~Epiphyte~~, infrequent on summit. On moss-sail  
Herb, to 30 cm tall. Fls light grn w/ orange  
hairs.

6118 Orchidaceae X9

Infrequent on summit. On moss sail. Herb, to  
20 cm tall. Fls dull orange, inflo to 10 cm long

6119 Loranthaceae X6

Epiphyte on Vaccinium. Fl. buds to 2 cm long,  
red. Frts subglobose, 1 cm diam, yellow-orange  
w/ 3 mm of style persistent at apex. Frt 1, gm at side,  
of light grn & white in x-section

6120 Vaccinium Ericaceae X8

Shrub, to 2 m tall. Bark scurfy red-brown.  
Frts yellow globose, < 1 cm in diam. diam  
of calyx remnants at persisting apex



6121 Vaccinium Ericaceae X1

Shrub, to 2 m. Bark red-brown w/ dense tomentum. Fts red gen, glossy, w/ persistent calyx. Seeds small & white semi-transparent gel.

PARI DAN GRAN SUMMIT

6122 Melastoma 2200-1730 X6  
-1730m

Tree, 4 m. Fls purple, stamens yellow.  
Bark light brown, small-flaking

6123 Bryophyte - epiphyte on tree  
in moss forest

6124 Moss - on tree at 2000m

6125 Scrambler in moss forest. Bark gray X8  
Levs leathery glossy above, glaucous below.  
Fls white, small, regularly aromatic. [1900m]  
[Unknown] [on exposed ridge]

6126 Syzygium Myrtaceae X5  
Small tree, 5m. Bark gray. Fl. buds white  
[1900m] [on exposed ridge]

6127 Zingiberaceae X2  
Epiphyte on small tree in moss forest. Lvs.  
brk orange. White on edges

(612)

6128 *Erchideum* X3  
Epiphyte on tree in moss forest, on exposed  
ridge. lfl. light green

6129 Fern X3  
Terrestrial fern in moss forest  
at 2000m

6130 *Cinnamomum* *lanceolatum* X1  
Tree, to 5m. Lvs of mango smell when  
crushed. One sample taken as voucher

6131 [Honn] *Dacrydium* X4  
[Skink] Small shrub, 1.5m, growing  
on top of BARUA [2200m] [Skink]

6132 [Kann BARUA] - *Holopteryx* <sup>Woods</sup> X4  
Tree, to 30m. (Skink voucher specimen)

6133 Sedge in open area of moss  
forest, 2000m

6134 *Castanopsis* - *Fagaceae* X3  
[Leaf/fruit collection] [1800m]  
[In moss forest / *Fagaceae* forest transition zone] ~~See page 1~~

Tree, 20m, 35cm dbh. Bark  
grey + gray-brown

6135 Orchidaceae x1  
Epiphytic orchid on tree in moss forest  
at 1900m

6136 [TORREY Nigering] x2  
Small common pitcher plant  
growing among mosses

6137 Gesneriaceae x3  
Hb, to 15cm, growing on soil in moss  
forest at 1800m

6138 Nepenthes x1  
Sp. growing on moss in moss forest

6139 Rhocharandra x1  
Epiphytic. Fls red, 6 x 3 cm.  
In moss forest, ca. 1900m

6140 Moss on tree in moss forest - 2000m

6141 Moss on tree in moss forest - 2000m

6142 Lichen

- Leafy lichen on rocks and mosses  
in moss forest 2000m

6143 Lichen

Lichen on branch in moss forest at 2000m

6144 Moss - 1900m

6145 Moss - like little Christmas  
trees, 1900m

6146 Moss at 1900m

6147 Moss at 1900m. Growing  
in circular fashion



6148 Moss at 1900m

6149 Moss at 1900m

6150 Moss at 1900m. Small sample

6151 Moss at 1900m

6152 Small ~~leafy~~ mosses }  
6153 " " }  
~~6154~~ " " }  
" " }  
" " }

6154 Orange toadstools at 1900m

6155 Terrestrial toadstool  
at 1900m

6156 Moss at 1900m

6157 "leafy" lichen at 1900m

6158) Thallus lichens at 1900m  
~~6159~~ (6167)

~~6160~~

6168 Epiphytic mycophyte at 2000m  
Very common

6169 Moss at 2000m

6170 Lichen on living tree at 2000m

6171 Moss at 2000m

6172 Lichen - crusty - on tree at  
1730m

FR. FEB 17

Friday Feb 17 - 1730-400m

6173 Durio Bombacaceae X5

[TOKO] - Common on slopes and by rivers.

Tree, 15m, 50cm dbh. Bark red - chocolate brown  
w/ light brown lenticels. Inner bark fibrous  
light brown, wood yellow brown. Buttresses to  
3m up, 2m at, thin. Fts light green  
15cm diam, strongly spined. Fth 2-5 lobate,  
4 common, many w/ 2-3 w/ evidence of  
aborted buds. Seed wrapped in buttery and  
very tasty yellow oil. Seed white in X-section,  
except for yellow-brown embryo [LEAF & FRUIT COL.  
SECTION]  
Said to be eaten by bear and pig, unless  
man gets there first.

[ON SLOPE 690m] [Dry forest]

6174 Anacardiaceae

Tree, 20m, 60cm dbh. Bark dark brown,  
iridely vertically fissured. Inner bark red  
w/ slight white-yellow sap. Fth 15cm w/  
yellow flecks, 10-18cm and beaked.  
Smell strongly of mango. [645m]  
[FRUIT AND LEAF COLLECTION]

Ononis

6175 Lithocarpus Fagaceae

Tree, 25 m, 1 m dbh, buttresses to 2 m up and 4 m out. Bark grey-brown, shallowly vertically fissured, deeply marked. Inner bark red laminated yellow, blueish brown. Wood ~~of~~ numerous yellow lenticels running in vertical lines. Fls 5 cm across, ~~the~~ 2 cm deep - flat appearance. [Tcharch - common by river and slopes, Good firewood.]

6176 Litsea Lauraceae X1  
Branch of fruit found on ground. Fls red; green cupule.

6177 Orchidaceae X2  
Terrestrial orchid at 1800m. Fls white

6178 Orchidaceae X2  
Terrestrial orchid at ~~17~~ 1700m. Fls purple, low purple green

6179 Unknown X1  
Herb at 400m in flat area by river. Fls white

6180 Antidesma Euphorbiaceae x1  
Shrub at 1800m. 2m tall. Fruits 2x1cm,  
slightly beaked, light red-green

6181 Agathis Podocarpaceae x1  
Seedling taken at 1800m - Voucher

6182 Melastomaceae x2  
Herb, 20 cm at 1600m. Common down  
to incised at 250m, perhaps beyond

6183 Fern x2  
Terrestrial fern at 1800m

6184 Liliaceae x1  
Herb, 30cm at 1800m Fls white

6185 Fern x3  
Terrestrial fern at 1800m

6186 Unknown x3  
Herb, 10cm tall at 800m. Lvs white spotted

6187 Antidesma  
Tree, 8m tall. Bark light gray.  
Inflorescences candeliform, to about 20cm long



Frts 6 cm diam, subglobose, pink

6188 ~~Urticaceae~~ Liliaceae xB

Terrestrial herb, 30 cm. Frts glaucous, glossy red,  
sub-globose, 1 cm diam, trilobed persistent  
style remains abv. Seed one, gm-white.

6189 Orchidaceae

x4

Epiphytic orchid at 1300 m. Petals cream w/  
red stripes

6190 Unknown

x1

Terrestrial herb at 300 m by river side  
fls white.

6191 Annonaceae

Tree at 800 m primary forest. Tree, sm, bark  
dark grey. Tepals equal sized, dull  
green-purple, 3 x 1 cm

6192 Unknown

x2

Frts only. 2 found on ground. Dorsal per  
shaped, 12 x 6 cm, light blue, gm.  
Core yellow w/ numerous seeds (small)  
Calyx persistent, accrescent.

6193 Frond like lichen at 1800-~~2000~~  
Blue grn. Epiphyte on tree

6194 Dark grn-blue thallus  
lichen on tree at 1600m

⊙ ~~6194 Blue 300m~~ ⊙  
6195 Orange-yellow bracket  
toadstool. Narva at 300m

6196 Large white toadstool. Stipe  
4x2 cm, cap oboconical, 10 cm across,  
1 cm thick, ~~the~~ mushroom texture

6252

6196 ~~the~~ Crimson red bracket  
fungus at 300m

6197 White toadstool. Stipe 5x1  
cm, cap 7cm across

6198 Thin but firm orange-brown  
bracket fungus on rotting log

6199 Grey toadstools on  
rotting log. Stipe thin, 6 cm  
cap 1 cm across

6200 Brown bracket fungi on  
white margins on rotting wood

6201 Bracket fungus  
Ochre-white above, white below

6202 Toadstool.  
Stipe thick-gray, 6 x 2 cm Cap  
4 cm diam, gray-green

6203 Bracket fungus on  
fung. log. Metallic green-gray  
above, white below.

6204 Bracket fungus Orange-  
brown above, strongly ridged below.

6205 Obconical toadstools  
on rotting wood. Brown within,  
gray on the outside

6206 Lichen on tree at 2000 m. Thallus, blue-green

~~6206~~ 6207

18 Feb 1995 - Sat - Rest day



BY RIVER - CAMP 7/350m



6207 Dimocarpus Sapindaceae x5

[LAKOWI] Tree, 15m, ~~40~~ 40cm dbh.  
Bark grey, fissured. Fts 3cm dia.  
subglobose, strongly warty / ~~granular~~. Fls  
corolla light buff brown. Petal thin, white-  
translucent. Seed dark glossy ~~red~~-brown,  
2-3 cm across w/ 1 cm dbh. White alternate,  
cream in x-section [Inflorations bran at  
thick vertically running petioles, strongly ribbed,  
5 slightly arcuate clypeal lobes prominent  
at base of mature fruit in strong at  
inflorescence]. [Common by stream/river and  
other flat areas. Grown in ~~the~~ local  
gardens or esp. deliberately.]

6208 Fabaceae

x4

Climber. Growing by river. Fls pale  
yellow. cream w/ brown anthers.

6209 Xanthophyllum? Myrsineaceae R/S

[Meyalia] Tree, 10m to about 50cm

dbh. Bark white - light grey, smooth.

~~Bark~~ Fruits round, 6 cm diam, light orange at  
and ~~rough to touch~~ and slightly rough to touch  
Frt. wall 5 mm thick, ~~carpels~~ carpels seemingly 3,

ovules incomplete. Seeds ~~one~~ (2-3), covered  
in fleshy white flesh. Seeds white in x-section  
revealing ~~but~~ red cotyledons. Leaves

thinly leathery, dark glossy green above,  
light below. Tinge both light grey.

[V. common by river, 5m. E. of ... (probably ...)]

-6210 Areaceae Licuala

x1

[SIRAT] Arborescent, to 25 cm tall. Frts

1 x 0.5 cm, glossy light red. Seed 1, semi-  
transparent white color in x-section of red  
endosperm.

6211 Malvaceae [Simarouba?] x4

Tree, 4m. Bark ~~small~~ Bark brown, tinged  
both of small horizontal orange-red

lenticels. Frts 1 cm diam, globose, single  
seeded. Stamens persistent above with  
panded cap



Sunday Feb 19, 1995 RIVER - CAMP 3  
→ CAMP 1

But River

6212 Tristania Myrtaceae X 7

Tree, ~~to~~ weeping over river. To 10m tall, 30cm dbh. Bark red, peeling stringy. Lvs light green below. Calyx cream-green, Petals 5, white, quickly caducous. Stamens yellow-brown. V. canna along river banks.

6213 Syzygium Myrtaceae X 3

Shrub, 3m tall 2 or 3 trees (some flowering) in middle of river (~~in water~~ bald red). Lvs light green. Fls 4x2 cm, petals white, caducous. Stamens white.

6214 Meliaceae X 3

Tree, 4m on river bank. Midrib red hairy below on ~~and~~ are young twigs. Fruit 4x2 cm, orange-brown. Ring, exuding white sap on opening. Anl 5mm thick, almost colorless, translucent. Taste thin, purple. Seeds 2, orange green. X-section

6215 Climber

Both light gray-brown. Lvs light greenish  
w/ prominent 2° veins prominent. Fr + velvety  
brown, slightly ribbed, sitting on 5 persistent  
calyx lobes. Lind. 7mm thick, sud. as, gon. X4

6216

Rep

Terrrestrial fern on river-bank. Very  
Common X5

6217 Rubiaceae

X3

Tree, 5m. Lvs thickly leathery. Fruit greenish  
w/ red stripes, subglobose, 2cm diam. 2 seeds

6218 Dryopteris Rubiaceae X2

~~Small tree~~ Tree, 3m. Lvs and yg stems  
light grn. Fr + velvety brown, subglobose,  
6cm diam. Stylar column persistent.

6219 Dimocarpus Sapindaceae X3

Tree, 10m, 40cm dbh, creeping over river and  
here a buttressed base on the side away from  
water. Bark light gray. Infloresc. rachis  
strongly ribbed and lenticelled frt light  
yellowish brown. ~~lenticelled~~. Vented strongly.  
Seed 1m to shy and - seed w/ fleshy

bram testa (appearing purple under air).  
Seed white in X-section

6220 Dendrobium - Orchidaceae ~~X1~~ X6  
On rocky stretches in middle of riv. Herb,  
25 cm tall, fls purple, 4 on long.

6221 Verbenaceae X6  
~~Shrub~~ <sup>Climber</sup> 2m. Bark green and light brown.  
Lvs leathery, light green below. Fls open fleshy  
purple from white, containing 2 seeds. Fls  
very watery

6222 Araliaceae X3  
Shrub, to 30cm, found on rocks by river.  
Young lvs fleshy and red & purple & yellow.  
Fls yg, green.

6223 ~~Ham~~ Humalolera Araceae X1  
Herb by river-side, 40cm tall.

6224 Sandoricum Meliceae X5

[~~Baka~~ Bahpu - fls edible]

~~Tree~~ Common on wet bank Tree to 10m tall,  
35 cm dbh. Bark grey. Lvs glossy, light green  
Frt yellow, 6 cm diam. Seeds 3, reddish



embedded in white pithy fleshy

6225 Orchidaceae X2  
Epiphytic on tree by river. Flower yellow  
orange. Foliage green 12x1 cm, ribbed.

6226 Nandea X5  
Tree, 4 m. Lvs leathery, very light green below.  
Young twigs & leaf-bran below swollen ~~when~~  
arcs remain for cat. Inflo. terminal,  
globose, 4 cm diam.

6227 Rubiaceae X10  
Growing on rocks by river  
Shrub to 1 m tall. Bark gray green, its young  
green, seeds white.

6228 Orchidaceae X2  
Epiphytic orchid. Inflo to 20 cm, fls minute,  
dull mustard yellow.

6229 Syzygium hirtum Myrtaceae X8  
Tree, 10 to 15 m. Bark moss-covered,  
youngest twigs green hairy. Older twigs  
red brown, still hairy. Inflo. light red  
softly fleshy buds green & yellow.

6230 Orchidaceae x2

Epiphytic orchid on tree by riv.  
Fls small, white.

6231 Rutaceae x6

Herb, creeping by roadside Fls white,  
1 cm long

6232 Medinilla Melastomataceae

Shrub on tree by riv. Lvs leathery,  
dull dark green above, light below. Frs  
opening orange, ~~then~~ globose,  
almost 1 cm diam. Numerous small  
white seeds

6233 Rutaceae x8

Tree, 3m. Trunk bark red brown, slightly  
vertically striate. Frs opening through  
orange to fleshy red, almost 1 cm diam,  
single seeded. (Kolapindi)

6234 Saurauia - Saurauia

Shrub, 3m. Petals 5, white, bilobed.  
Petals numerous, yellow. Styles 5, white

6235 Zizyphus Rhomazeae x6

Clusker both brown and gm, strongly  
[0.10m] lenticelled, (fr. gm, 5x3cm,  
Seed 1/4 hard like [Drupe?] - effect  
Became [?] [?] [?], brown, in white  
flesh. Sticky [?] gelatinous eddles  
sep from int, frigs.

~~6236 Antirrhoea x5~~

6236 Acanthaceae x5  
Shrub, to about 30 cm

6237 Baccaurea Euphorbiaceae x3  
[Crabak] J. [?] by river and [?] beyond  
Tree, 12m, 35 cm dbh. Frs 15 cartilaginous, orange-  
to 6 cm diam. 3 [?] [?], [?] 3, [?],  
of 2 seeds [PLANTED in Local [?]]  
Frs large, yellow, of [?] red  
Indurated in midrib and 20 mm below.  
[Good TASTE]

6238 Baccaurea Euphorbiaceae x  
[Crabak] J. [?] by river and [?] beyond.  
Tree, 12m, 35 cm dbh. Both  
gray. Frs cartilaginous, to 8 cm diam,  
subglobose, [?] [?], 4 angled  
with [?] [?] Good tasting,

Just recently planted in hangings. x 8

6239 Dipterocarpus Stuebelii x 6  
Tree, creeping over river. To 15m tall, 50cm  
d.b.h. and thin offshoots spread on side away  
from river. ~~Leaves~~ ~~Algae~~ shiny red. (Bark grey  
fissured). Shingles to 8 x 1 cm, yellow  
red, short but densely hairy.

6240 Strigocarpus - Alpinus x 4  
[KORONGES - CARR BE EROSEN, LIKE BY CHILDREN]  
Herb, 1 m tall tall fruit red, 5 x 3 cm,  
seeds brown, many sided.

6241 Liliaceae - Panax x 3  
Herb, to 1 m. (Pls ~~with~~ ~~fruit~~, 2-3 cm  
long. 1.5 cm diam, single seeded.  
[BOM BAN - FRUIT EATABLE]

6242 Polystichum Ananaceum x 4  
Common on river bank. Tree, 4m. Bark  
dark brown. Flt yellow buds 1 cm diam  
frt. dark green, globose, 1.5 cm diam

6243 Syzygium Myrtaceae X7

On river bank. Tree, 3m. Twig bark  
light red brown. Fls buds white.  
Inflorescences axillary

Mon Feb 20 1995

① Camp 1 g/s READING ②

6244 Shorea ~~[leaf fruit]~~ x 6  
Emerald - wood good for boards. Tree  
20m, 50cm dbh. Bark light grey, lichen  
patched. Bark smooth to 2m up, Bark vertically  
fissured. Seen commonly by river bank, fruit  
yellowish. Also on slopes - many types

6245 ~~[leaf fruit]~~ x 4  
Conarus Bursera  
Tree, 15m, bark grey, strongly lichen.  
Fruit white [Kojukotokung - no uses]

6246 Unknown x 4  
Clinker or Dipt sp. Bark light  
grey-brown. Lvs light green. 20m  
almost invisible, 20m' wrinkled fruit  
grn, still immature, 5mm diam.

① RIVER - CAMP 1 → RIVER ②

6247 Moss on rotting log

6248 Myrsinaceae Rubiacaceae X5  
Shrub on rocks, to 40 cm tall. ~~Not~~ Some rocks  
swollen for ants. V. common

6249 Orchidaceae X1  
Epiphytic orchid on tree

6250 ~~Rubiaceae~~ Rubiaceae X9  
Tree, 6 m. Bark black. Small leaves;  
cluster before shoot's fork, ~~the~~ after  
sprouts small lvs. exsert. fts gl. dense,  
3 cm diam, 3 calyx lobes pointed, Seeds 6.  
Fairly common

6251 Elaeagnaceae X7  
~~Rubiaceae~~ <sup>to Myrsinaceae</sup>  
Shrub on tree. Bark black. Petals white,  
tree w/ strong aroma. Vaguely like  
elderberry. Petals quickly caduceous  
V. common.